

THE CHEMIST AND DRUGGIST

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No. 9. Vol. XXXII.

APRIL 28, 1888.

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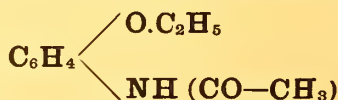
EXCHANGE COLUMN, PAGE 8.

ADVERTISERS' AND BUYERS' REFERENCE LIST AND INDEX TO ADVERTISEMENTS, PAGES 23-25.

THE NEW ANTIPYRETIC

PHENACETINE—BAYER

(Para-Acetphenetidine)



MANUFACTURED BY THE
FARBENFABRIKEN VORM. FRIEDR. BAYER & CO
ELBERFELD.

THERAPEUTIC PROPERTIES.

IN HEALTHY PERSONS Phenacetine, according to Dr. Köbler, does not produce any ill-effects in doses of from 0.5—0.7 grm. (8—12 grains); but in all cases of pyrexia even relatively small doses of 0.3 grm. (5 grains) are never without perceptible antipyretic effects. To adults it is best administered in single doses of 0.6—0.8 grm. (10—12 grains), instead of smaller ones given repeatedly; no disagreeable after effects, such as nausea, vomiting, or cyanosis, were ever observed in 50 cases presenting various febrile conditions. On the contrary at fever temperatures of 39.5—40.5 C. (103.1—104.8 F.) a reduction of 1.5—2.5 C. (2.7—4.5 F.) invariably ensued; the reduction is usually gradual, reaching its maximum in 4—6 hours, the rise is likewise gradual extending over 8—10 hours. Decrease of temperature (Apyrexia) is usually obtained without sweat secretions but the pulse improves and a pronounced euphoria ensues.

Phenacetine does not cause any disagreeable symptoms in healthy persons even in doses of 1—2 grm. (16—32 grains); in 20 cases (12 adults and 8 children) in which it was administered it proved to be a quickly and energetically acting antipyretic. Nausea, vomiting, cyanosis, collapse, or other disagreeable after effects never occur. Dr. Hoppe fully confirms Dr. Köbler's statement as to the gradual fall and very slow rise of fever temperatures. Both investigators agree that Phenacetine produces **Apyrexia** as surely as any other antipyretic.

FOR CHILDREN.—In eight cases reported upon by Dr. Hoppe, Phenacetine acted energetically as an antipyretic on children in doses of 0.2—0.4 grm. (3½—7 grains) without causing any disagreeable symptoms, and Dr. Sloyter in Barmen has recently given it to young children in doses of 0.5 grm. (8 grains); he obtained by its administration not only the desired antipyretic effect, but also a condition of evident comfort and quiet.

NEURALGIA.—Besides its antipyretic effects, it possesses eminently antineuralgic properties. Dr. Hoppe published 15 cases of severe cephalalgia and megrim, where Phenacetine produced an effect which was most beneficial and, at the same time, most astonishing. It should also be mentioned that Phenacetine was of special value in a case which had previously, but unsuccessfully, been treated by Antifebrin and Antipyrin. In such larger doses as 1—2 grm. (16—32 grains), given several times a day, Dr. Hoppe has found Phenacetine to be an excellent antineuralgic; it does not act quickly, but surely (generally in 1—2 hours), without causing any ill effects. On this point Dr. Heusner also says:—

"Phenacetine promises to become a most valuable addition to therapeutic agents, owing to its beneficial influence on the nervous system. It is not a narcotic like morphia, but acts, as Dr. Hoppe also observes, similarly to Antipyrin, and is more comforting and pain-allaying. Its wonderful anodyne effect is shown in cases of neuralgia and other derangements of the nervous system arising from reflectant irritation or general nervousness. I have prescribed it almost daily in megrim, gastralgia, ischias, insomnia, &c, caused by diseases of the uterus, the kidneys, or by overwork, &c, and have frequently heard it highly and enthusiastically praised. In insomnia caused by over-work and nervous excitement I myself have taken doses of 1 grm. (16 grains) with the best result. Phenacetine, contrary to quinine, bromide of potassium, and the narcotics proper, does not cause lassitude or other disagreeable symptoms, and is easily taken on account of its tastelessness. As it promises to become an important remedy in many hysterical, neuralgic, and other nervous disorders, I do not hesitate to predict for it in this respect a distinguished place among therapeutic agents."

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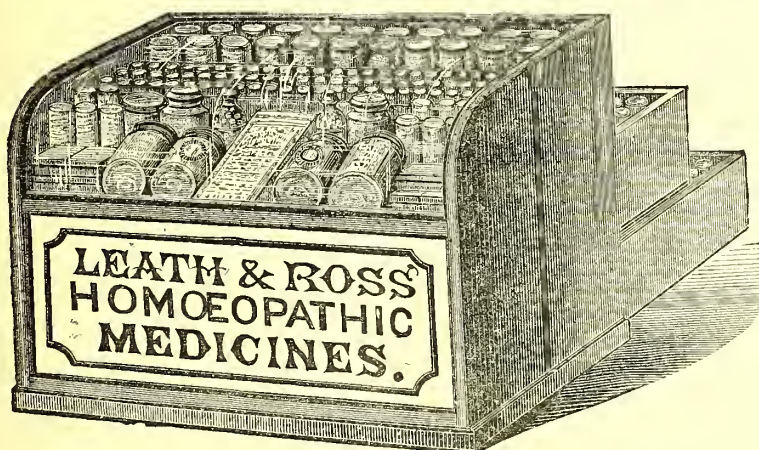
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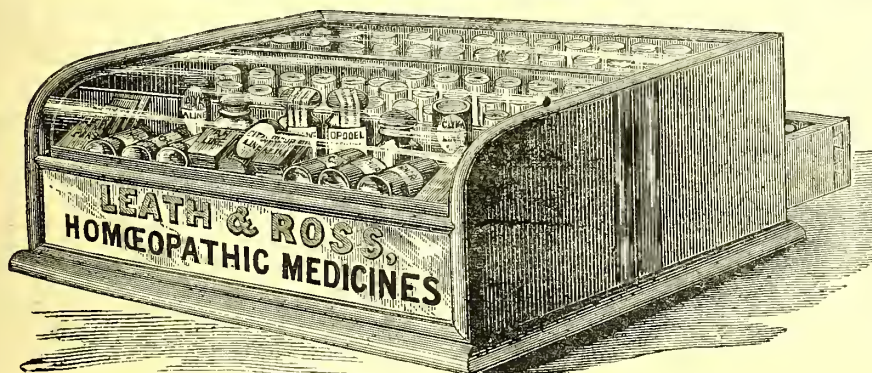
Neroline	1/1½	Berberine	1/1½	Linimentum Auricularis	...	1/1½
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MARCH 1, 1888.

CONTENTS OF No. 3, VOL. 3.

Literary articles on "Paregoric and the Sale of Poisons in New South Wales," "The Accounts of the Pharmaceutical Society of Australasia."

COLONIAL REPORTS.

New South Wales.—Pharmacy Board, Official Report—Pharmaceutical Society—Prosecutions under the Sale and Use of Poisons Act.

New Zealand.—Pharmacy Board of New Zealand and Midland Pharmaceutical Association Official Reports.

Queensland.—Pharmaceutical Society: Report of Council Meeting—Prosecution under the Medical Act—Personalities.

Tasmania.—Hobart Chemists' Association and Launceston Pharmaceutical Association: Report of Meetings.

South Australia.—Pharmaceutical Society: Official Report.

Victoria.—Pharmaceutical Society of Australasia: Council Meeting, Annual Report and Balance Sheet.

Letters from our own correspondents in Sydney, Adelaide, Christchurch, and Hobart—Student's Corner—Trade Notes—Correspondence—Poisoning Cases—Proposed Exhibition at London—The Dentists Act of Victoria, &c., &c.

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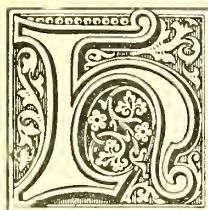
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IMPORTANT ANNOUNCEMENT.

See page 63 (bottom folio) for particulars of

SPECIAL CIRCULATION

OF

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TO

THE UNITED STATES & CANADA

On May 19, 1888.

Vide Correspondence in 'CHEMIST & DRUGGIST,' Oct. 8, 1887.

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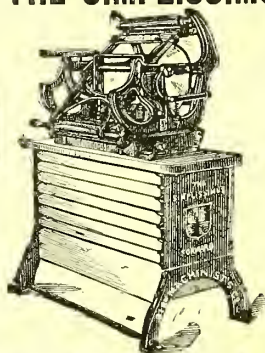
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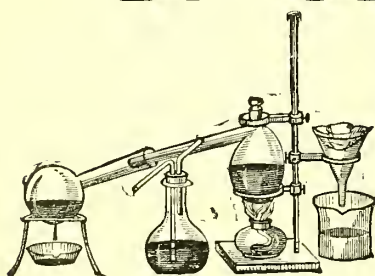
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Capsule-moulds for 15 minims, as described in article on capsule-making in *Chemist and Druggist*, 14th inst.; burnished iron, with two screw-nuts for fixing on slab, 5s. per doz., or 1l. 16s. per 100. N. Allsworth, Chemist, Bromley, Kent.

Offers wanted for 7 "Chemists' and Druggists' Diaries," from 1880 to 1886; also an original letter from the late Jacob Bell, 338 Oxford Street, dated March 22, 1848, on spt. aeth. nitros., on the vigilance of excise officers in smuggling it into England; its price then, &c., to a chemist on the Borders. C. P. W., 2 Bridge Terrace, Berwick-on-Tweed.

One mahogany medicine chest, 13 in. high, 14 in. broad, 10 in. deep; doors open back and front and top opens. Front compartment contains: 6 4-oz. cut flint-glass wide-mouthed hottles, with stoppers ground, for powders, also 6 drawers made of oak with sliding lids. Back compartment: 12 cut flint-glass bottles for liquids, 1 scale and weights, glass pestle and mortar (fty.), tile for pill-making, bone spoon; price £5, or offers. 2l/42.

Second-hand glass, &c., specie jars; 1 small label, glass cover, 31 in. high; 2 30-in. do. and arms; pair ditto, 26 in., arms, and tin covers; pair ditto, 23 in., arms, japanned covers, with plinths; 4 ditto, 16 in., scrolls, flat covers; carboys: 1 16-gal. cut stopper; 1 12-gallon ditto; 2 9½-gal. plain stoppers and ebonized plinths; 2 6-gallons, 5 5-gallons, 3 3-gallons, 12 gallon; 1 1-gallon flat front, five cylinders valves, 45 rounds, labelled, good; 166 rounds of pots, labelled; 220 rounds and damaged labels; 16 dozen rounds and jars; and 10 odds, with contents, yellow paper labels; 24 green carboys, caps and labels; 39 1-lb. black, labelled; various ointment and extract pots; two pair drug scales; references with orders. Hawke & Son, 111 Court, Great Wild Street, London, W.C.

WANTED.

Chemist and Druggist for Jan. 15, 1887. 207. Two-gallon York Glass Company's percolator. Cuthbert, Huddersfield.

Counter show-case as Maw's A. 8. Size and price to Banks, Chemist, Stockport.

Judd's "Rhymes" complete. Send lowest price to E. L. Thomas, 173 Marylebone Road, N.

Mahogany wall-case; state particulars and price. Hendersou, Chemist, Blackpool.

Suffolk's "Microscopic Manipulation." Send price to W., Market Place, Sheffield.

Shares of "Chemists' Mineral Waters Association." Jno. Holding, Chemist, Barabur.

Chemical balance, with stirrup pans and case. Particulars and price to "Anal," 42 Cannon Street, E.C.

Mahogany dispensing screen with glass case, &c., about 7 feet; send sketch, length, and height. Illsley, Barnard Castle.

Old gold, platinum, silver, or dental metals; most value in cash, or high class mechanical work. Entwistle, Dentist, Shaw Street, Liverpool.

Chemist and Druggist, No. 10 (Oct. 1873); 363 and 368 (April 2 and May 7, 1878; Vol. 20, Nos. 1, 2, 3; 1885, Vol. 21, Jan. 15. State price only. 207/23.

MANN'S PERFUMES.

The accompanying cut represents a facsimile of our Pound Bottle, containing fluid ounces, with elongated and etched stopper for trying the odours. We have arranged our Perfumes into ranks according to popularity and demand; those having the most ready sale comprise the first rank, then, next in order, the second rank, then the third rank. This plan gives the Druggist at a glance a more comprehensive idea of our line, and also enables him to make his selection according to the general popularity of the odours. We would always advise a full line of all the perfumes kept in stock, as the second and third ranks contain many odours desired by persons of special tastes, and, while they are not generally of as ready sale as those of the first rank, yet they are always staple. The goods are all made of the same degree of strength, and are intended to be of equal desirability, as some will take precedence in popular favour over others. We make only the finest quality of Perfumes, which are especially designed to meet the demand of the best drug trade throughout the world.

PERFUMES

OF THE FIRST RANK IN POINT OF POPULARITY.

Lady of the Lake.
White Lilac.
White Rose.
Heliotrope.
ockey Club.
New Mown Hay.
Dilly of the Valley.
Prairie Flower.
Wild Lotus.
Queen of May.
Myrtle Bloom.
Slang Ylang.
Stephanotis.
Violet.

PERFUMES

OF THE THIRD RANK IN POINT OF POPULARITY.

Nik.
Pichouly.
Re Geranium.
T. Rose.
Ridoletia.
Nht Blooming Cereus.
E. Bouquet.
Milefleurs.

Illustrated Catalogue
furnished upon application.

PERFUMES

OF THE SECOND RANK IN POINT OF POPULARITY.

Carnation Pink.
Mignonette.
Ocean Spray.
Tuberose.
Jasmin.
Moss Rose.
Pond Lily.
Frangipanni.
Orange Blossom.
Musk Rose.
Trailing Arbutus.
Honey Suckle.
Sweet Briar.
Sweet Pea.
West End.
White Heliotrope.
Wood Violet.

PRICE LIST.

	Per doz.
$\frac{1}{2}$ oz., assorted odours...	8/
$\frac{1}{4}$ " " " "	14/
1 " " " "	20/
2 " " " "	32/
3 " " " "	42/
4 " " " "	62/
9 " " " "	112/
18 " " " "	216/
1 " " " Tourist	16/
Small trial size, per gross	23/
Large " " "	35/

Our Perfumes combine richness of fragrance with delicacy and permanence of odour. They may be handled and retailed either from bulk or in small packages, both in cold and warm climates, without appreciable deterioration of quality. They take the lead and enjoy the preference in all countries wherever introduced.

Being to receive your orders, we are,

Yours very respectfully,

C.A. MANN & CO., 43 MURRAY ST., NEW YORK CITY, U.S.A.



EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,

Opposite the Julichs Place, COLOGNE.

ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1873.

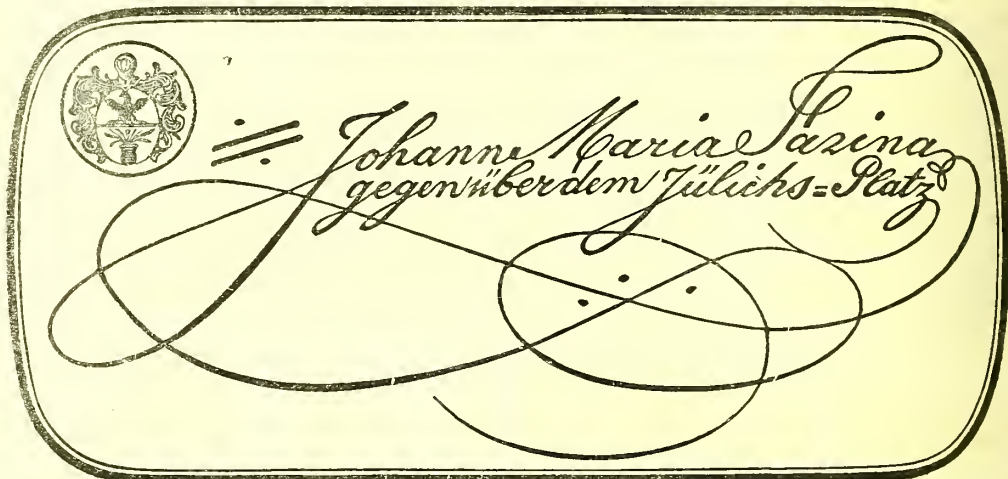
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal; H.R.H. Frederic William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 13s. 6d. per dozen, against bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCracken,

No. 38 Queen Street, Cannon Street, London, E.O.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	—	—	—	—	—	—	12 bottles	} to one dozen.
" 2. Short White Bottles	—	—	—	—	—	—	12 "	
" 3. Double ditto	—	—	—	—	—	—	6 "	
" 4. Wickered Bottles (small)	—	—	—	—	—	—	8 "	
" 5. ditto (medium)	—	—	—	—	—	—	4 "	
" 6. ditto (large)	—	—	—	—	—	—	2 "	

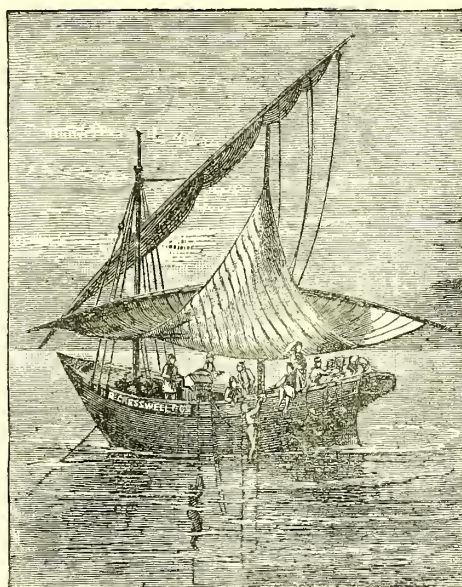
JOHANN MARIA FARINA,
OPPOSITE THE JÜLICH'S PLACE

COLOGNE: January, 1833.

SPONGES.



RECEIVED
THE
HIGHEST
AWARD
AT THE
ADELAIDE
EXHIBITION,
1887.



TRADE MARK.

BRANCHES:

GLASGOW.
DUBLIN.
LIVERPOOL.
PIRÆUS.
SMYRNA.
HAVANA.
NASSAU, N.P.

R. CRESSWELL & CO., LIM.

32 RED LION SQUARE, LONDON, E.C.

MR. R. CRESSWELL, Managing Director.

This Business was established in 1850 by Mr. R. Cresswell, the senior partner of the well-known firm of R. CRESSWELL & CO., now carried on as a Limited Company, of which Mr. R. Cresswell is the Managing Director.

R. CRESSWELL & CO., LIM., can supply Sponges of every quality YIELDING MUCH BETTER VALUE than those offered by other firms.

We have had OUR OWN STAFF on the Mediterranean and Bahama Fisheries for the last 30 YEARS and fear NO COMPETITION.

SPECIAL LINES NOW ON SHOW SUITABLE FOR THE APPROACHING SEASON.

ILLUSTRATED PRICE LIST POSTED ON APPLICATION.

PLEASE NOTE STYLE AND ADDRESS:

R. CRESSWELL & CO., LIMITED,

32 RED LION SQUARE, LONDON, W.C. ESTABLISHED 1850.



JOHN R. HALL'S WOOD VIOLET.

PATRONISED BY
H.R.H. The Princess of Wales.
H.R.H. Princess Christian.
H.I. and R.H. the Crown Princess of Germany.
H.R.H. the Princess Louise (Marchioness of Lorne).
H.R.H. Princess Henry of Battenberg.
H.R.H. the Duchess of Teck, &c.

EDWIN R. BIGGLESTON'S HELIOTROPE ESSENCE

The *Queen*, the *Ladies' Newspaper*, remarks:
"Edwin R. Biggleston's HELIOTROPE ESSENCE is delicate and durable; can be well recommended."

In Bottles, 1/6, 2/6, 5/6, 7/6, 10/6, and 21/.

EDWIN R. BIGGLESTON,
CANTERBURY.

PRIZE MEDAL, CALCUTTA EXHIBITION.

BRECKNELL'S SKIN SOAP

IS THE BEST AND MOST SALUBRIOUS SOAP IN USE.

BRECKNELL'S SADDLE SOAP

Used in the Royal Stables, by the Army, and in Hunting Establishments.
THE BEST ARTICLE FOR THE PURPOSE.

BRECKNELL, TURNER & SONS,
TO THE QUEEN, &c., HAYMARKET, LONDON.

SEE INDEX, PAGES 23-25.

SHIPKOFF & CO. OTTO OF ROSE

MANUFACTURERS & MERCHANTS,
KIZANLIK, BULGARIA.

VIRGIN OTTO ONLY DEALT IN.

REPRESENTED IN ENGLAND BY
GEO. P. BAKER, 19 Ivy Lane, Newgate St., London, E.C.

E. FOUGERA & CO.,

No. 30 NORTH WILLIAM STREET,
NEW YORK, U.S.A.,

Importers of and Agents for the Principal
FOREIGN MEDICINAL PREPARATIONS
AND SPECIALTIES.

AGENCIES AND CORRESPONDENCE SOLICITED.

HIGH-CLASS PERFUMERY

"Messrs. J. Atkinson & Co.'s

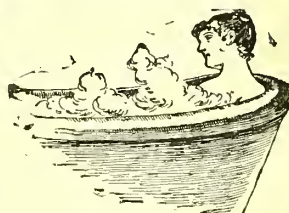
PERFUMES are in aroma and
strength particularly fine."

Chemist & Druggist,
Jan. 29, 1887.

J. ATKINSON & CO
Proprietors of the
REGISTERED
"ZENITH"
BRAND PERFUME
Samples and quotations on application,
at their only address,

5 FINSBURY SQUARE, LONDON

PASTA MACK



TRADE MARK.

Of all Chemists and Perfumers.

Sole Manufacturer, H. MACK, ULM a/D.



FABRIQUE
DE

MATIÈRES PREMIÈRES DE
PARFUMERIE.

PARFUMERIES DE SEILLANS

(VAR, FRANCE).

Flower Pomades. Perfumed Oils. Flower Extracts
Essential Oils. Distilled Waters, &c., &c.

OF ALL WHOLESALE DRUGGISTS, OR WHOLESALE ONLY OF

R. C. TREATT, Dunster House, Mincing Lane, London

EWEN'S GUARANTEED PURE LARD

Trade Mark.

ORIGINAL & BEST BASIS
FOR OINTMENTS, &c.

Trade Mark.



Adeps Prap.
Adeps Benz. } EWEN'S



Can be obtained through any
WHOLESALE HOUSE.

Mutton, Beef, Veal, and Deer Suet and Beef Marrow
Clarified Trotter and Neats' Foot Oil.

Every variety of
TOILET SOAP
EWEN'S Clarified Fat Work
Perfumery and
Toilet Soap Factory,
5 HATFIELD STREET, LONDON, S.E.

HEAD-QUARTERS FOR SPONGES.

Telegraphic Address—"CUBANS LONDON."

FREDERIC CRESSWELL.
ERNEST J. J. CRESSWELL.
ALFRED G. CRESSWELL.
THEODORE C. SCHMITZ.



CRESSWELL BROTHERS
Sponge Importers & Merchants
SPONGES OF EVERY DESCRIPTION DIRECT FROM
GREECE, TURKEY, THE BAHAMAS, FLORIDA & CUBA
2, RED LION SQUARE, LONDON, W.C.

NEW ADDITIONAL PREMISES.

In consequence of great increase of business, CRESSWELL BROTHERS have taken an additional Warehouse at No. 1 Red Lion Square, next to their present premises. The additional Show Rooms now at their disposal will enable them to better display their unrivalled Stock, which is the largest in the World.

SPONGES FOR THE SUMMER SEASON.

CRESSWELL BROTHERS make a speciality of the best Toilet and Bath Sponges, both bleached and unbleached, for Druggists. All buyers who require Sponges of good shape, good texture, and strong fibre will find that Cresswell Brothers' goods combine those characteristics. A considerable saving will be effected by dealing direct with Cresswell Brothers, as they are the only firm who can place their goods straight into the shop of the retailer from the hands of the fishermen.

SAMPLE CASES SENT ON APPROVAL.

Buying Establishments at Aegina & Hydra, Greece; Calymnos & Smyrna, Turkey; Nassau, Bahama Islands; & Key West, Florida

SOLE AGENTS FOR THE CUBAN SPONGE FISHING COMPANY.

Branches at 3 ALBION CRESCENT, GLASGOW; 11 WETERINGSTRAAT, AMSTERDAM.

GOVERNMENT CONTRACTORS.

AGENCIES IN ALL THE MOST IMPORTANT EUROPEAN AND COLONIAL CENTRES.

WRITE FOR NEW EDITION OF ILLUSTRATED PRICE LIST.

CRESSWELL BROTHERS, 1 & 2 Red Lion Sq. (next to Church), LONDON, W.C.

No connection whatever with a Company trading under a similar name in the same square.

RANDALL'S BLACK CURRANT LOZENGES

Plain Black Currant, old square 2/6
 Plain Black Currant, rough oval 2/6
 Black Currant and Ipecacuanha 2/6
 Black Currant and Tannin .. 3/

Black Currant Voice (warm astringent) 3/
 Black Currant Cough Lozenges* 3/6
 *Ipecac. & Morph., strength as "B.P."

In Bottles, 1-lb., 2-lb., 4-lb., and 7-lb. For Exportation, in Soldered Tins, of any size. From EDWARDS, London, or SANGER & SONS; through any Wholesale House; and from the Manufacturers,

RANDALL & SON, SOUTHAMPTON,

Who will forward Samples by post on application.

Also Brown Cough Lozenges, 2/; 7 lbs. stamped with name free, and Musk Lozenges (Special), 2/6.

N.B.—Medical Lozenges of every kind, including those of the Pharmacopœia of the Hospital for Diseases of the Throat, London, made with Black or Red Currant.

DINNEFORD'S FLUID MAGNESIA



PERFECT IN PURITY AND UNIFORM IN STRENGTH.

The most efficacious antacid and mild aperient for Delicate Constitutions. Ladies, Children, and Infants.

OF ALL WHOLESALE DRUGGISTS.

TEMPERANCE BEVERAGIS.

A Sixpenny Bottle of

ADAMS'S EXTRACT OF HERBS

Will make 8 gallons of sparkling, wholesome, and refreshing

PRIME HERB OR BOTANIC BEER.

Unequalled in strength and richness of flavour by any preparation made from fresh herbs.

The Extract is very carefully manufactured, on the most improved scientific principles, from the herbs and plants gathered and dried the proper season, when their virtues are in full vigour, thus retaining their invigorating and health-giving properties.

It makes an excellent beverage, giving natural flavour and co'o and a sparkling foam like bottled ale.

In Bottles, 6d. to make 8 gals.; 1s. to make 18 gals.; and 2s. 6d. to make 50 gals.

ADAMS'S GINGER ALE ESSENCE

makes a sparkling, refreshing, and invigorating beverage for summer and winter.

ADAMS'S SPARKLING FOAM PRODUCER.

One tablespoonful added to 2 gallons of the Herb Beer or Ginger Ale, just before bottling, gives a creamy foam like bottled ale.

Wholesale Agents,

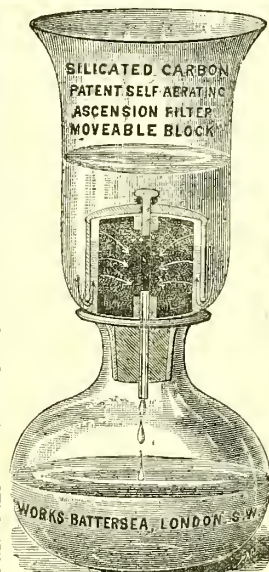
W. ELWARDS & SONS, Queen Victoria St., London.

Specially favourable terms to large Buyers from the PROPRIETOR,

B. ADAMS, Mansfield, Notts.

LEAD POISONING

LIBERAL DISCOUNT TO THE TRADE.



Glass Table Filters.

So commonly the result of Drinking Unfiltered Water is rendered

IMPOSSIBLE

BY USING

SILICATED CARBON

FILTERS
AERATED

Through which no particle of Lead can pass. This fact is attested by the leading analysts of the day.

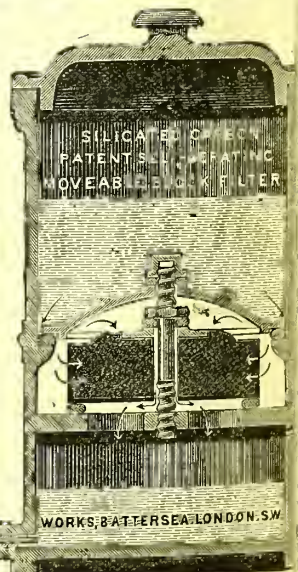
"The most remarkable property of the Silicated Carbon Filter appears when its filtering power is tested in the removal of Lead from solution . . . I wish to dwell with the utmost emphasis upon the value of these Filters for removing Lead."

H. C. BARTLETT, Ph.D., F.C.S.

The Silicated Carbon Block can be Instantly Removed, leaving the whole of the Filter Open for Inspection and Cleansing.



PAGE.



Domestic Filters.

LIBERAL DISCOUNT TO THE TRADE.

FOR PRICES AND FULL PARTICULARS, WRITE TO THE
SILICATED CARBON FILTER CO., BATTERSEA, LONDON, S.W.

BY ROYAL LETTERS PATENT.

HASSALL & CO.'S PHOSPHO-CITRIC ACID

The Best, Purest, and most Economical Agent for Acidulating all Saccharine Beverages.

Price only **10d.** per lb., in 9 and 18 gallon casks; **1s.** per lb. in small quantities.

One Ounce Measure is equal to One Ounce of Citric. It produces a higher class Beverage, and shows an economy of between £6 and £7 per cwt.

We do not ask for an order, we merely solicit the favour of a trial.

3-oz. Sample for Postage (3 stamps), or 14 lbs. on approbation.

PAMPHLET GRATIS.

UNSOLICITED TESTIMONIALS.

We are pleased to be able to testify that your Phospho-Citric Acid is satisfactory under the most severe trials. We have placed Manufactured goods in which your Acid was used in a refrigerator for months, and also for nine months in a stove in which the temperature stands at over 150° and night, and the bottles when examined to day were as bright as the day they were put in.

LEMON STREET, ABERDEEN.

I have pleasure in hearing testimony to the fact that first-class waters are produced, with greater body and finer fruity flavour, at half the cost of Citric; and further that your Acid is free from all traces of **LEAD**, generally found in the crystals.

I am persuaded that your Acid will ultimately command the Mineral Water Trade.

Yours faithfully, WM. THOMSON.

"And may I also be permitted to add my testimony to the excellence of your Phospho Citric Acid; I consider it far and away preferable to Citric."

C. H. ORTON, STOKE GOLDING.

FERMENTATION.

When Fermentation is present, Saccharine Beverages made with this Acid will keep sound and bright several days longer than those made with Crystal Acids.

HASSALL & CO.
YORK ROAD, KING'S CROSS, LONDON.

TELEGRAMS:—"REMPUJARON LONDON."

ESTABLISHMENT OF BOULEVARD VOLTAIRE, 162 & 164, PARIS

GOLD & SILVER
MEDALSAT ALL
EXHIBITIONS.

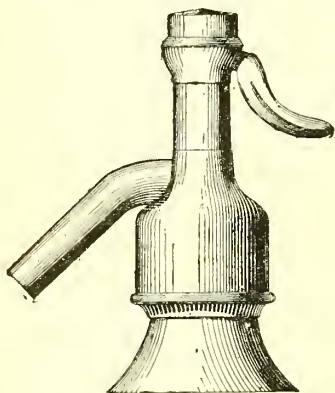
DURAFORT

PATENTED.

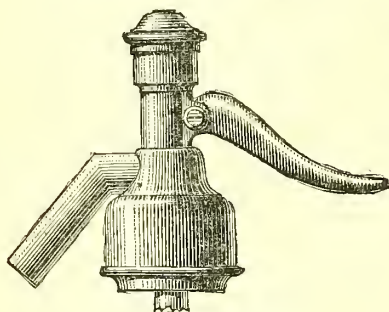
SYPHONS

OF ALL MODELS

Made of Bright or Ordinary
Metal,
and of White or Coloured Glass,
1st Quality.



SMALL LEVER.—No. 5.



LARGE LEVER.—No. 10.



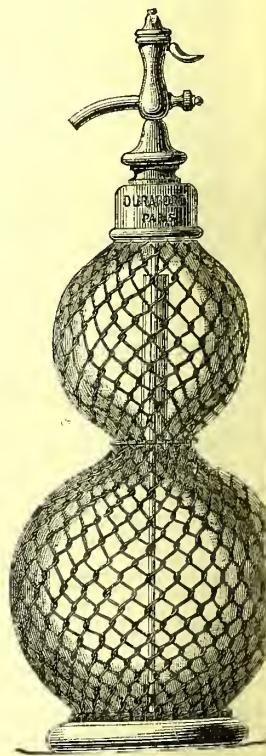
SMALL LEVER.—No. 1.

APPARATUS

AND

POWDERS

To Make Seltzer and Why
Waters, &c., &c.



SELTZATEUR.

New Patent Syphons with TUBES entirely made of CRYSTAL for Lemonade and Potash or Soda Water.

We beg to call the attention of our numerous customers to the quality of the material employed in the manufacture of our Syphons. In the bright quality not a particle of lead is employed. The crystal is of the very best quality; each Syphon is guaranteed to be tested before leaving our works.

SODA WATER MACHINES.

FILLING MACHINES.

Our General Catalogue and List Price will be sent free on application. Large Discount for Quantities.

JEWSBURY & BROWN'S

(MANCHESTER)

SPARKLING TABLE WATERS,

UNRIVALLED FOR PURITY AND QUALITY.



ODA WATER.

SEITZER WATER.

POTASH WATER.

LITHIA WATER.

SIMPLE
AERATED WATER.

LEMONADE.

GINGER ALE.

QUININE TONIC.

GINGER BEER.

HOREHOUND BEER.

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."

FRANCIS JONES, F.R.S.E., F.C.S.

"On the whole, I have no hesitation in stating that your Aerated Waters are of the highest standard of purity which is practically attainable."

LOUIS SIBBOLD, F.I.C., F.C.S.

"The Lemonade is, for flavour and general excellence, superior to any similar compound which I have examined, and contains no acid but Citric Acid."

"I took a sample of the water used in your manufactory, in the preparation of the Aerated Waters, and found it, as was the case with the completed compounds, entirely free from lead, copper, or any injurious matter whatever."

C. ESTCOCKET, F.C.S., F.C.I.

J. & B.'s siphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination.

113 MARKET STREET, and 44 DOWNING STREET, MANCHESTER.

16 MIDDLERIES LONDON E.C.
BOXES BOTTLES MACHINERY
ESSENCES

SODA WATER MACHINERY

AND ALL ACCESSORIES
FOR THE TRADE

BRATBY & HINCHLIFFE

HEAD OFFICE
SANDFORD STREET ANCOATS, MANCHESTER

*Catalogues, Circulars, Testimonials
Post Free*

FIRE!!

FIRE!!

FOSTER'S PATENT NOZZLE

For Converting Syphon Bottles immediately into

FIRE EXTINGUEURS.

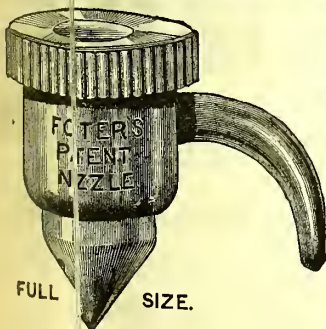
In Fancy Boxes containing 1 doz. Nozzles, 18/ each. Trade Discount, 33 $\frac{1}{3}$ per cent.
Handsome Showcard and Handbills given gratuitously.

Every room in every house should have a Syphon Bottle fitted with a Nozzle, ready for immediate use. It forms the Simplest and most Reliable Fire Extingueurs ever invented.

BARNETT & FOSTER, Manufacturers,

"Niagara Works," 26th Eagle Wharf Road, LONDON, N.

17



FULL SIZE.

Price 1s. 6d. each.

PRIZE MEDAL, International Health Exhibition, 1884. AWARD OF MERIT, International Medical and Sanitary Exhibition, London 1881.

DIABETES.

VAN ABBOTT'S GLUTEN BREAD,

AND ALL SUITABLE FOODS FOR DIABETIC PATIENTS.

VAN ABBOTT'S ELIXIR of SACCHARIN and SACCHARIN PERLES for SWEETENING TEA, COFFEE, &c., are perfectly harmless to DIABETICS and all to whom Sugar is injurious.

G. VAN ABBOTT & SON are Manufacturing GLUTEN CAKES, BISCUITS, &c., SWEETENED with SACCHARIN for DIABETIC PATIENTS.

Full particulars on application. PAMPHLET, with DIABETIC and other DIETARY TABLES, COOKING RECEIPTS, Price List, &c., Post free.

G. VAN ABBOTT & SON,DIABETIC, INVALID, and INFANT DIETETIC DEPOT, 5 Princes Street, Cavendish Sq., LONDON, W
TELEGRAPHIC ADDRESS—"GLUTENS LONDON."

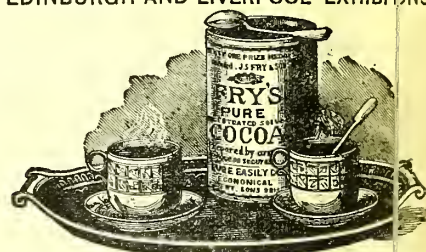
THIRTY-SIX PRIZE MEDALS AWARDED TO THE FIRM.

GOLD MEDALS
EDINBURGH AND LIVERPOOL EXHIBITIONS.

FRY'S

Pure Concentrated

COCOA



TRADE MARK.

Prepared by a new and special scientific process securing extreme solubility, and developing the finest flavour of the cocoa.

J. S. FRY & SONS, BRISTOL, LONDON, & SYDNEY, N.S.W.

To H.R.H. The Prince of Wales, The Empress of Germany, &

BRAND & CO.'S
PEPTONES
OF
BEEF,
MUTTON,
VEAL,
AND
CHICKEN.

NESTLE'S MILK FOOD FOR INFANTS.

ALSO WELL ADAPTED FOR CHILDREN AND INVALIDS.

Prepared at **VEVEY, SWITZERLAND**

TRADE MARK

The only Perfect Supplement and Substitute for
Mother's Milk.Easy of Preparation—requires merely the addition
of water.**UNIVERSALLY RECOMMENDED BY PHYSICIANS.**

HOLBROOK'S WORCESTERSHIRE SAUCE

HOLBROOK'S LONDON RELISH

HOLBROOK'S PURE PICKLES

THE BIRMINGHAM VINEGAR BREWERY COMPANY,
Limited, have for many years been the Sole Manufacturers of these articles.

The attention of the Company having been drawn to certain advertisements and other documents which have been circulated in the Trade, that the Public are invited to purchase these articles from persons other than the BIRMINGHAM VINEGAR BREWERY COMPANY, Limited, the BIRMINGHAM VINEGAR BREWERY COMPANY, Limited, have already commenced legal proceedings to protect the exclusive rights which they claim to these articles. The Public and the Trade are warned that any of the above articles purchased under this Brand from any Manufacturers except the BIRMINGHAM VINEGAR BREWERY COMPANY, Limited, will not only be spurious, but may expose the person retailing the same to the risk of being made Defendant to legal proceedings.

TO THE
CHEMISTS & DRUGGISTS
OF
GREAT BRITAIN.

TELEGRAPHIC ADDRESS: *St. George's, Middle St.,*
COLEMAN, *NORWICH,*
December, 1887.
GEORGE'S, NORWICH.

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

*N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
Trade prices on application.*

P.S.—Where the Licence is not held we are willing to pay the entire cost of a Retail Licence (the holder of which can sell any kind of Wines) if an assorted order of 12 dozen is sent us of any of our preparations. List on application. Our Liebig's Extract of Meat and Malt Wine **WITHOUT QUININE** commands a very large sale, and is recommended by over one thousand medical men who have sent us testimonials in its favour.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,
ST. GEORGE'S, NORWICH,
AND 3 NEW LONDON STREET, LONDON, E.C.

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S
HOUSEHOLD SPECIALITIES.

Yorkshire Relish

THE MOST DELICIOUS SAUCE IN THE WORLD.
To Chops and Steaks, Fish, &c., it is incomparable. In Bottles, 6d. and 2s. each.
CAUTION.—On each Yorkshire Relish Label is a Willow Pattern and name. GOODALL, BACKHOUSE & CO. No other is genuine.

Goodall's
Baking Powder

THE BEST IN THE WORLD.
Makes delicious Puddings without Eggs, Pastry without Butter, beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

Goodall's
Quinine Wine

B.P.
The best, cheapest, and most agreeable tonic yet introduced. Bottles, 6d., 1s., and 2s. each.

Goodall's
Custard Powder

For making delicious Custards without Eggs, in less time and at half price. Sold in Boxes, 2d., 6d., and 1s. each.

Goodall's
Blanc Mange Powder

Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delicious Blanc mange may be produced in a few minutes at a trifling cost, and may had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, Vanilla. Sold in Packets, 6d. and 1s. each.

Goodall's
Egg Powder

Acknowledged to be the only real substitute for eggs yet discovered. action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them wholesome and nutritious. One sixpenny tin will go as far as twenty-four eggs. In 1d. Packets; 6d., 1s., 2s. Tins.

SOLE MANUFACTURERS—

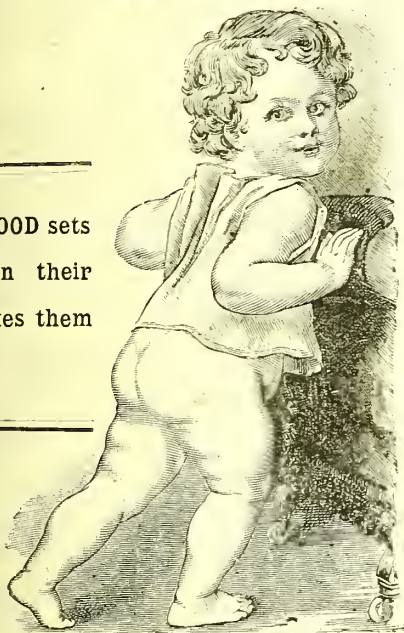
GOODALL, BACKHOUSE & CO
WHITE HORSE STREET, LEEDS.

A Monthly Price List of Druggists' Sundries
Patent Medicines, &c., can be had Post Free on application.

RIDGE'S FOOD

Has the **LARGEST**
SALE of any Infants'
Food in the World.

RIDGE'S FOOD sets
the babies on their
legs, and makes them
put along."



The demand for DR. RIDGE'S CELEBRATED COOKED FOOD has so increased in
popularity that it is estimated the sale exceeds by hundreds of tons annually all
the other foods of a similar character put together.

MANUFACTORY—

RIDGE'S ROYAL FOOD MILLS, LONDON, N.
Telegraphic Address—"RIDGE'S FOOD LONDON."

TYRER'S SAUCES

GOOD
VALUE

AND "BOROUGH" KETCHUP

THE GIANT 1d. BOTTLE OF SAUCE.
LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/6 per Gross.*

"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE,
OR READING SAUCE.

1d. Sample Bottles, dozen parcels	per gross 5/	extra quality 6/
1d. Giant Bottles, dozen parcels	" 5/5	" 6/6
1d. Giant Bottles, dozen parcels	" 6/	" 8/
1d. Giant Bottles, dozen parcels	" 6/6*	" 8/6
1d. Bottles (flat or round), reputed 1/2-pint	" 16/	" 24/
1d. Bottles (flat or round), reputed pint	" 26/	" 32/
1d. pint Imperial Round Stoppered Bottles	" 30/	" 36/
1-pint Imperial	" 50/	" 60/
12 1/2-gallon Casks (casks free)	each 20/	" 32/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.

A rich, fruity Sauce of fine flavour, and worth especial atten-
tion, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,
The "Borough" Ketchup and Sauce Maker,
70 LONG LANE, BOROUGH, LONDON, S.E.

SCOTCH AGENCY: 113 WEST NILE STREET, GLASGOW.
Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.
BURGOYNE & CO., 16 Coleman Street, London, E.C.
JOS. TRAVERS & SONS, 119 Cannon Street, London, E.C.

ROBINSON'S ORANGE WINE.

Speciely prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Cask
containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

PHARMACEUTICAL SHERRY WINE.

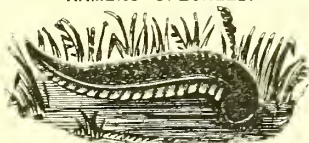
This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in
2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order
BROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

FOR CLEANING PLATE

BRADLEY & BOURDAS'S
ALBATHUM or WHITE ROUGE,
For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter
of a century ago, the sale has amazingly increased both at home and
abroad. A trial is only needed to prove its superiority over other plate
powder in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 6 Pont Street,
Belgrave Square, and 48 Belgrave Road, London, S.W.

HAMBRO SPECKLED.



TRADE MARK
REGISTERED.

All Orders by Post receive immediate attention.

LEECHES!

Warranted Healthy. Wholesale
and for Exportation. Direct
from Marshes.

FITCH & NOTTINGHAM,
LEECH BREEDERS,
4 CANONBURY SQUARE, LONDON, N.

ROBERT GIBSON & SONS,

MANUFACTURERS OF HIGH-CLASS LOZENGES OF EVERY DESCRIPTION,
JUJUBES, BOILED SUGARS, COMPRESSED PELLETS, &c., &c.

Shipped through London Houses to all parts of the World. Price Lists sent on application to the Works,

ELSKINE STREET, HULME, MANCHESTER ENGLAND.
LONDON DEPOT—1 AUSTRALIAN AVENUE.

"FAMORNIÉ."

LIEBIG'S

Extract of Meat.

As supplied to the War Office.

1-lb. J.	per lb.	6/2	per doz.	74/0	2-oz. Jars	per lb.	7/0	per doz.	10/6
1-lb. J.	"	6/4	"	38/0	1-oz. Jars	"	7/8	"	5/9
4-oz. J.	"	6/7	"	19/9	1-oz. Jars	"	8/0	"	3/0

Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

6 lbs. Carriage Free.

HAY'S HOP ALE ESSENCE

REGISTERED TRADE MARK.

FOR THE MANUFACTURE OF THE FINEST AERATED HOP ALE.

Is made from the Choicest Hops Grown.

HAY'S HOP ALE ESSENCE

"Supplies an excellent
stomachic, appetising, and
agreeable summer drink."

Brewers' Journal.

"A beautiful es-
sence, has a fine Hop
Aroma, and is quite a
pharmaceutical triumph."

The Chemist and Druggist.

"For this Essence a bril-
liant future may be antici-
pated. It possesses charac-
teristics very seldom to be
met with."

Mineral Water Trade Review.

"For flavour, strength, and
real solubility, this Essence
leaves nothing to be desired."

British & Colonial Druggist.

TRADE MARK



REGISTERED.

HAY'S HOP ALE

"This is an excellent
Alcoholic beverage."

"Evolves a delicious
of Hops."

"It is a Fine Bit
Beer, pouring it with
rich creamy ad."

British & Colonial Druggist.

"Possesses the Arom
bouquet and pleat fl
of the genuine op."

Mineral Water Trade Review.

"Is a nearer approach
Bass or Allsopp's Ale
any non-intoxicating
ing it."

Eastern Morning News.

Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s.

Quantity required, two fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S HOP ALE ESSENCE

FOR THE MANUFACTURE OF THE FINEST AERATED HOP ALE.

"Since Mr. HAY, the well-known Manufacturing Chemist, of Hull, surprised the Pharmaceutical world, some ten years since, by the production of a beverage, which, until then, had been thought an impossibility, viz., a perfectly soluble and transparent ESSENCE OF GINGER, nothing has since been so successful as to have attracted so much attention in this direction as his latest ESSENCE OF HOPS, which, like his other Essences, is a product of his own mind, and contains in itself. The HOP ALE made from this Essence evolves a DELICIOUS AROMA OF HOPS, and supplies that much needed desideratum of abstainers, 'A Glass of Non-Alcoholic Beer.' We have always felt that teetotalers laboured under a disadvantage that ought not to exist, in having no really decent beverage in the place of Wine and Beer. By this Pharmaceutical triumph of Mr. HAY, this difficulty has now been overcome, and it affords us much pleasure to commend this truly Temperance Drink to the notice of abstainers and non-alcoholic drinkers alike."

—*Medical Press.*

HAY'S HOP ALE ESSENCE

"I certainly remarkable for the purity and reality of its results. Made from the choicest hops, and treated in a manner of which Mr. HAY is the possessor of the monopoly, this HOP ALE ESSENCE supplies an excellent stomachic, and an agreeable stimulating Summer Drink. The HOP ALE produced by this ESSENCE is of a most refreshing and invigorating character, with all the appetising flavour and delicate aroma of its more intoxicating prototype, which it approximates more closely than any similar preparation we have yet tasted. It may be advantageously taken up as a speciality for which a large consumption may safely be predicted."

—*Brewers' Journal.*

**W. HAY, Manufacturing Chemist, Beverley Road, HULL
ENGLAND.**

Telegraphic Address—CHEMICUS LONDON.

ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

[illegible]

Who Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

Murray, Sir James (1850)

CAPSULES

Denonai, J. (Medicinal)
Duncan, Flockhart and Co.
(Cascara Sagrada)
Durant, F., and Co.
Evans, Sons and Co.
Hooper, B., and Co.
Maw, Son and Thompson

CAPSULES (ME-

TALLIC)
Betts and Co.
Mellin, G. (Machine)

GARMINE

Bush, W. J., and Co.
Sellers

CATALOGUE

Evans, Sons and Co. (Price
Current)
Ester, S., Son and Thompson
(Price Current)
Sanger and Son
Thompson, Millard and Co.

CHEMICALS

Dennett and Jenner
Bush, W., Son and Co.
Dunn and Co.
Ewart, A.
Fletcher, Fletcher & Stevenson
Gaskell, Deacon and Co. (B'
carbonate of Soda)
Hill, A. S., and Son
Howards and Sons Pharma-
ceutical)
Kuhn, B.
Levermore, Aug., and Co.
May and Baker
Middleton, Kirkpatrick and
Barr
Morris, Callard, and Co.
Oscar Andrae and Co.
Stern, G. and G. (Pumiline)
Fenner, R., and Co.
Smith, T. and H., and Co.
Tyke and King
White, A., and Sons
Zimmermann, A. and M.

CHALK PRECIP.

Dann and Co.
Levermore, Aug. and Co.
White, A., and Sons

CHEST PROTECTRS

Maw, Son and Thompson
Wood, V.

CHL. OF POTASH

(Compressed Tablets)
Burroughs, Wellcome and Co.
Hooper, B., and Co.

CHLOR. OF GOLD

Oscar Andrae and Co.
Rowland, L.

CHLORIDE OF LIME

Government Sanitary Co.
National Chemical Co.
New Carbolic Sanitary Co., Ltd.

CHLORODYNE

Blyton-Bage and Co. (Twem
low's)

Burroughs, Wellcome and Co.
Davenport & Brown's

Freeman, R.
Thomas, Wakeham and Co.
Tawle, A. P.

CHLOROFORM, &c.

Duncan, Flockhart
Macfarlan, J. P.

Smith, T. and H.
Zimmermann

CIGARETTES

Evans, Sons and Co.
French Hygienic Co. (Coca)

CITRIC ACID

Hassall's (Phospho)
Nascio, Aveline and Co.

COCAINE HYDRO.

Howards and Sons

COCA WINE

Armbricht, Nelson and Co.
Evans, Sons and Co.

French Hygienic Co. (Cigar-
ettes and Tobacco)

COCOA & CHOCOLTE

Cochbury
Fry (Maltes)
Van Houten's Cocoa

COD-LIVER OIL

Allen and Hanbury's
Burgoyne (Peptideine)

Burroughs, Wellcome
Evans, Sons and Co.
Hill, A. S., and Son

Lorimer and Co.
Smith, T. J.

Woolley, Sons and Co.
Wright, Layman and Umney

COFFEE

Eggington and Co. (Coffee
Essence)

COLLapsible TUBES

Betts and Co.
Brooks, H., Peel and Co.

COMP. ESSENCE

Carter and Clarke

COMPRESSED MDCNS

Allen and Hanbury's
Burroughs, Wellcome and Co.

Hooper, B., and Co.

CORN CURES

Maw, Son and Thompson
Robinson, B.

CONFECTORY

Bage, Blyton and Co.
Gibson, R., and Sons

Kerfoot, T.
Soden Mineral Pastilles
Warrick Brothers

CONCENTD. LIQS.

Evans, Sons and Co.
Fletcher, Fletcher & Stevenson
Keith, B., and Co.

COTTON WOOL

Haynes G., & Co. (Absorbent)
Maw, Son and Thompson
Robinson and Sons (Absorbent)

Sanger, J., and Sons
Seabury and Johnson

DENTIFRICES

Jewsbury and Brown
Newbery and Sons
Roberts & Co. (Enamellos)

Sulton, O., and Co.
Thompson and Capps.

Woods, W. (Area N^o 1)

DISINFECTANTS

Government Sanitary Co.
National Chemical Co.
New Carbolic Sanitary Co., Ltd.

Sanitas Co.

DOG MEDICINES

Spratts (Patent)

DRUGGISTS' SUN.

Ayrton and Saunders
Evans, Lescher and Webl
(Hawley's Counter Adjuncts)

Evans, Sons (Savars)
Hill, A. S., & Son

Idrie and Co.
Lynch and Co.

May, Roberts and Co.
Newbery, F., and Sons

Sanger and Sons
Schultze and Co.

Sherklock Bros.
Soul, W. H., and Co.

Thompson, Millard and Co.
Toogood, W.

Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

DYES

Ayrton and Saunders
Pronk, Davis and Co.

EAU DE COLOGNE

Farina, J. M.

EFFERVESCENT

Allen and Hanbury's (Saline)
Bishop, A., and Sons

Curtis and Co.
Evans, Sons and Co.

ELECTRIC APPAR.

Colthrust & Harding (Electric
Light Oil)

Darton, F., and Co.
Friedlander, A.

EMBROCATION

Clark, W.
Ellmell, Sons and Co.

Kennedy Co. (Limited) (Seven
Sea's)

ENEMAS

De P. & Co.
Angram and Son

Lynch and Co.
Maw, Son and Thompson

Sanger and Son
Schultze, F., and Co.

Idrie and Co.
Lorimer and Co.

May and Baker
Oldfield, Pattison and Co.

Stevenson and Howell
Tyke and King

Tyler, P. (Anchovies)
Vogt, G.

Woolley, Sons and Co.

ESSENTIAL OILS

Bush, W., Son and Co.

Bush, W. J. (Lemons, &c.)
Cocking (Japan Peppermint)

Evans, Sons and Co.
Jackson, J., and Co.

May and Baker
Nascio, Aveline and Co.

Rocke, Tompsett and Co. (Egyptian)
Stallman and Fulton

Stevenson and Howell
Sykes and Co.

Todd, A. M.
Vogt, G.

Warrick Brothers
Wright, Layman and Umney

ETHER

Duncan, Flockhart and Co.
(Chloric)

Howards and Son
May and Baker

Robbins
White, A., and Sons

EXTRACT, MEAT

Australian Meat Co.
Bristol and Co.

Coleman and Co.
Liebig Co.

Liebig's Wine Co.
Viking Food and Essence

EUCALINUM

Rocke, Tompsett and Co. (Anti-
septic Poultice and Vinegar)

EUCALYPTUS OIL

Fletcher, Fletcher & Stevenson
Grimwade, Ridley and Co.

EXTRACTS, FLUID

Allen and Hanbury's
Barber, G., and Co.
Burgoyne, Burbridge

Evans, Sons & Co.
Fletcher, Fletcher & Stevenson

Hearon, Squire and Francis
Oldfield, Pattison and Co.

FEEDING BOTTS.

Kilner Bros.
Maw, Son and Thompson

May Roberts and Co.
Pocock, Kevell and Co.

Thompson, Millar.
Toogood, W.

FILTERING

Doulton and Co.
Mawson Swan, and Weddell

Slack & Brownlow
Siliated Crbn Fltr Co.

FLY PAPERS

Ford, Shapland and Co.

FOAM PRODUCERS

Bush, W. J., and Co.

FOOD WARMERS

Clarke, S.

FOOD (Infants & Invalids

Allen and Hanbury's
Benger's Pancreatized

Brand and Co.
Burroughs, Wellcome (Pepton-
izing)

Dahl's Dispepsia Cakes
Goodall, Backhouse and Co.

Hearon, Squire (Maltes)
International Patents Association

(Dr. Mell's Health Biscuits)
Lazenoy, E., and Son

Liebig Co.
Mottershead and Co. (Benger's
Food)

Nestle, H.
Ridge's, Dr., Food

Spring and Co. (Kef.)
Van Abbott (Dietetic)

GINGER ALE

Adams, B.

Harrison and Co.
Hay, W. (Essence)

Mills, R. M.

GLYCERINE

Fink
Martindale, W. (Nitro-Glyce-
rine Tablets)

Maw, Son and Thompson
Price's Candie C.

GRANULAR PREP.

Bishop, A., and Sons

Burroughs, Wellcome and Co.
Bush, W., and Co.

Curtis and Co.
Evans, Sons and Co.

Hearon, Squire and Francis
Hill, A. S., and Son

Wright, Layman and Umney

GUMS

Fink (Arabic, &c.
Pronk, Davis and Co.

GUTTAPERCHA

Duncan, Flockhart

HAIR PREP.

Bates, F. W. (Frizzetta)
Brodie, J. (Imperial Hair Dye)

Capper, W. B. (Crimdons,
Cheshrough Minr. Co.

French Hygienic Co.

HERB BEER EXTS.

Adams, B.

Newhall and Mason
Potter and Clarke

HERBALISTS

Adams, B.

Newhall & Mason (Ext. of Herbs)
Potter and Clarke

Wilkinson, A., and Sons (Com-
pressed Hops)

HOMOEOPATHIO

Epps and Co.
Keene and Ashwell

Leath and Ross
Thompson and Capper

HOPS

Wilkinson, A., and Sons (Com-
pressed)

HOP ALE ESSENCE

Hay, W.

HOSPITALS

London Homoeopathic

HYPOPHOSPHITES

Duncan, Flockhart and Co.
Dunn and Co.

Fellows
Fletcher, Fletcher & Stevenson

Symes & Co.
Swann, H. H. (Dr. Churchill's)

Tyke and King
Yeatman, F. J.

INK (See MARKING.)

Bewley and Draper
Duncan, Flockhart

INHALERS

Maw, Son and Thompson
Toogood, W.

INSECTICIDES

Evans, Sons and Co.
Keating, T.

Sandford
Steiner and Co.

KETCHUP

Tyler, P.

LARD
Ewan, J.

LAMPS, LIGHTS, &c.

Clarke, Samuel ("Fairy")
Friedlander, A.

LEECHES

Fitch and Nottingham
Potter and Clarke

LIME JUICE

Idrie and Co.
Kernick and Son

LINSEED

Idrie and Co.
Mumford, G. S.

LINT

Liverpool Lint Co.
Maw, Son and Thompson

Newman (Surgeons')
Robinson and Sons

Seabury and Johnson

LOZENGES

Allen and Hanbury's
Blyton, Bage & Co. (Medicated)

Evans, Sons and Co.
Gibson, R., and Sons (Manfrs.)

Hill and Son
Houde, A. (Hydrochlorate of
Cocaine)

Kerfoot, T.
Lorimer and Co.

Martindale, W. (Nitro-Glyce-
rine Tablets)

Warrick Brothers (Heliotrope
Pastilles)

LOOFABS

Elste, A., and Co.
May, Roberts and Co.

Sanger and Sons (Bath Gloves,
Belts, and Socks)

MACHINERY

Birmingham Machinists' Co.
Holloway (Lancashire)

Bracher and Co.
Brinjes and Goodwin

Burroughs, Wellcome and Co.
Carter, J. H.

Dale, J. H.
Melin, C. (Capsulines)

B. Nickels and Co. (Funnels)
Sherwin

Werner and Pfeiderer

MAGIC LANTERNS

Hughes, W. C.

MAGNESIA

Bishop, A., and Sons

Bush, Son and Co.
Curtis and Co.

Dinneford
Henry, T. and W. (Calcinet)

Lorimer and Co. (Citrates)
Murray, Sir James (Mills)

Oscar Andrae and Co.

MALT EXT., ETC

Allen and Hanbury's

Burroughs, Wellcome and Co.
(Malt Extract "Kepler")

Eckell's
Hearon, Squire and Francis

Lorimer and Co.
Paton's Chemical Manu-
facturing Co.

MENTHOL

A 1 Menthol Depot, A. W.

Shirley, Proprietor
Rutter, E. R.

Castle Menthol Co.
Cocking and Co.

Hocken Wilson and Co.
Maw, Son and Thompson

Mikado Menthol Co.
Murray, A. W.

Todd, A. M. (Crystal Oil of
Peppermint)

MARKING INKS

PHOTOGRAPHIC

Botwright & Grey
Howards & Sons (Chemicals)
Perken, Son & Rayment
Mason and
Ward and
Oscar Andre and Co.

PLASTES

Burroughs, Loom and Co.
Mather, W.
Maw, Son and Thompson
J. Dalmas, & Co.
Sabbary and Sons
Smith, W. P.

PILLS (Ctd, &c.)

Allen and Harveys (Rochester)
Pearl Coated)
Barron, Harveys and Co.
Becham, Thos.
Evans, Sons & Co.
Heaton, Squibb and Francis
Hill, A. S., and Sons
Hooper, Dr.
Kerlock, T. (S. Coated)
Lorimer and
McKesson and Sons Ovoid-
capped

Merion and
Newbury and
Ranger, J. and
Smith, W. P.
Southall, Bros. & Barclay
Swain, H. H.
Warner, W. R. (Coated)
Wileys and Co.

PILL MACHINES

Maw, Son and Thompson
Robertson, J. & Co. (Coating)
Toogood, W. (C. & S.)

PODOPHYLLIN, &c

Keith, B. and
Smith, T. and
Toogood (E. C. P. regist.)

PORCELAIN GDS.

Poole, H. and
Toogood (E. C. P. regist.)

POLISHIN

Baumgartner (Brilliantine)
Bradley, Bourd & Alabum
Clark, W.
Oakes, John, and Sons

PRINTING

Birmingham Mailists' Co.
Bowers Bros.
Facsimile Apparatus Co.
Ford, Shapland & Co.
Silverlock, H.
Townsend, J. (Printer)

PUMILINE

Burroughs, Wells and Co.
Stern, G. and G.

QUININE SALTS

Howards and Son
Oscar Andre and Co.
Zimmerman

RENNET

Benger's (Essence of)
Johnsen and Jorgensen

SACCHARIN

Allen and Hanbury
Burroughs, Wellcome and Co.

SALICINE

Macfarlan and Co.
Smith, J. and H., and Co.

SALOL

Kuhn, B.

SAUCES, PICKLES

Birmingham Vinegar Brewery

Goodall, Backhouse and Co.
Lazenby (Harvey's)
Tyrer, P.

SEA SALT

The Maldon Crystal Salt Co.
Warren, A. and J. (Stoddart's
Sea Salt)

SCHOOLS OF PHARMACY, HOSPITALS, &c.

Edinburgh Classes
Liverpool School
London Homoeopathic and
Medical School
Manchester College
South London School of
Pharmacy, Lim.
The School of Pharmacy
Tully, J.
Westminster College

SEALING WAX

Fisher, Clark and Co.
Stewart, G., and Co.

SELTZOGENES

Idris and Co.
May, Roberts and Co.

SHAVING

Dukas and Co. (Brushes)
Hovenden (Euxesais)
Lloyd, A. S. (Euxesais)

SOAP (SOFT, &c.)

Brecknell, Turner and Sons
Chiswick Soap Co.
De Pass and Co.
Maw, S., Son and Thompson
Pearl Soap
Stern, G. and G. (Pumil'ne
Toilet and Sanitary)
Whitaker and Grossmith

SHEEP DIP

Bigg, T.
Grindley and Co.
Tomlinson and Hayward

SMELLING SALTS

Shirley, A. W.

SHOP FITTERS

Bowling and Govier
Bygrave, J. and W.
Corran, J. R.
Dowlett, S.
Fattall, E. (Show Cases)
Yates, W. S.

SPECTACLES

Botwright and Grey
Darton, F., and Co.
Raphael and Co.

SPRIT

Boord and Son
Burroughs (Pure & Methyl.)
Harvey, J. W., and Co.
Jones and Mason (Methyl.)
Macnair, J. & D.
Phillips and Co.
Smith, Stephen and Co.

SPONGE

Cresswell Bros.
Cresswell, R., and Co. (Lim.)
Evans, Sons and Co.
Hutchinson, A., and Co. (Bag.)
Maw, Son & Thompson (Bags)
Peterson, M.
Sherlock Bros. (Sponge Bags)

STAMPS (RUBBER)

Pollard, A. W.
Richford, E. M.

STOPPERS

Austin and Co. (Sprinklers)
Barnett & Foster (The Eclipse)
Brooks, Peel (Sprinklers)

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Ayrton and Saunders
Bailey, W. H., and Son
Christy, T., and Co.
De Pass and Co.
Haywood, J. H.
Hutchinson, A., and Co.
Ingram and Son
Liverpool Patent Lint Co.
Maw, Son and Thompson
Newsome, C.
Robinson and Sons
Thompson, Millard and Co.
Woolley Sons and Co.
Wood, Vincent

STARCH

Grithley (G'one)

STROPHANTHUS

Burroughs, Wellcome and Co.

SUGAR

Hobson, R., and Sons

SYPHONS

Barnett and Foster
Dunfort, M.
Idris and Co.
Kilner Bros.

SYRINGES

De Pass and Co.
Maw, Son & Thompson, S.
Sumner, R. and Co.

SYRUPS

Fletcher, Fletcher (Liquors)
Idris and Co.
Swann, H. H.

TARTARIC ACID

Middleton, Kirkpatrick and
Bar

TEA

Cassell, J., and Co.
Cave, Johnson and Co.
Gt. Tower St. Tea Co.
Heseldine, Wm., and Son
Kearley and Tonge
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Friedlaender, A.

TEREBENE

Hearon, Squire and Co.

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Maw, Son and Thompson
Perken, Son and Rayment
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TIN CANISTERS

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TOILET FIXTURES

Downing, J. S.

TOOTH PASTE

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Maw, Son and Thompson
Sutton, O., and Co. (Black)
Woods, M. (Aveca)

TRADE MARKS

Horn and Son

TRUSSES

Bailey, W. H., and Son
Evans, Sons and Co.
Haywood, J. H.
Lynch and Co.
Maw, Son and Thompson

TYPE-WRITING

Facsimile Apparatus Co.
Pollard, A. W.
The Universal "Simplex"
Type-Writer

URETHANE

Howards, Sons and Co.

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Bridges and Co.
Tomlinson and Sons

VARNISH

Clark, W.
Colthurst and Harding

VACCINE LYMPH

Association for the Supply
of the Pure

VERMIN KILLERS

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Sanford and Son
Steiner and Co.

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Clark, W.
Corcor, R. (Devonshire Oils
Dav and Sons
Day, Son and Hewitt
Gregory, C. W. (Vesico Sudorifics)
Gregory, W. (Devonshire Oils)
James, R. J. (Bilster)
Sorratt (Dogs)
Tomlinson and Hayward

VINEGAR

Birmingham Vinegar Brewery
Co.
Rothermel (Making)

WAFERS

Crouch, F. B. (Damiana)

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Allen and Hanbury
Barron, Squire and Co.
Burgess, Willows
Burgoyne, Barbridge
Bush, W., Son and Co.
Evans, Lecher and Webb
Evans, Sons and Co.
Evans, Sons and Masor (Lim.)
Ferris and Co.
Harker, Stag and Morvan
Hearon, Squire and Masor
Hewlett and Co.
Lorimer and Co.
Hill, A. S., and Son
Oldfield, Paterson and Co.
Potter & Clarke (America, &c.)
Southall Bros. and Barclay
Sumner, R., and Co.
Symes and Co.
Thompson, Millard and Co.
Thompson, H. A., and Son
Woolley, Jas., Son and Co.
Wright, Layman and Umey
Wyleys and Co.

WINDOW TABLETS

Corsan, J. R. (Engraved)

WINES AND SPIRITS

Boord and Son
Coleman and Co.
Durrant, G. (Orange)
Goodall, Backhouse and Co.
Idris & Co. (Quinine Wine)
Ingram and Royle
Liebig's Wine Co.
Phillips, G. and Co. (Pure
Spirits of Wine)
Smith, Stephen, & Co. (S.V.B.)
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Sanitary Wool Wool Co.

NEWBURY'S OVAL PEDESTAL PILL VASES

REGISTERED PATTERNS.

PRICES MATERIALLY REDUCED.

NEWBURY'S**1888 CATALOGUE.**

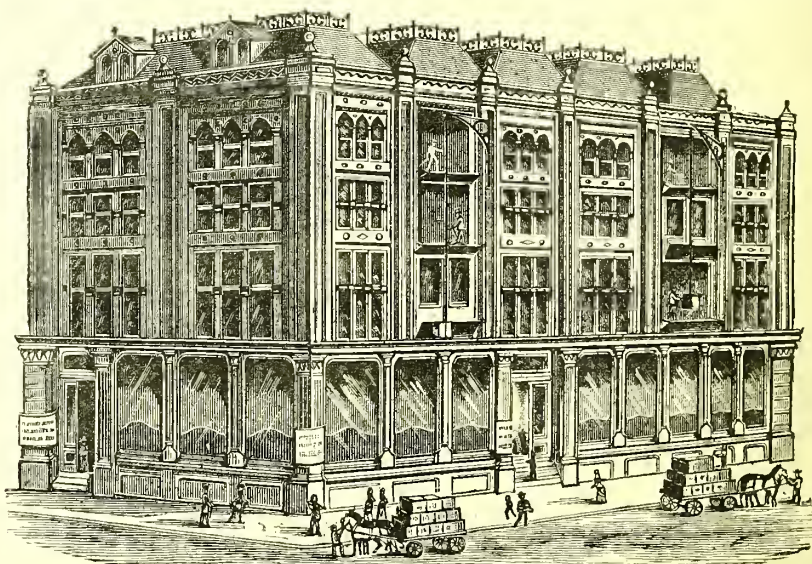
Label sign Registered under Trade Marks Act.

Vases supplied with Pills only.

HESELTINE'S

THE PREMIER TEA OF INDIA AND
CEYLON, IS THEIR SPECIAL IMPORTATION
AND THE PERFECTION OF TEA.

REGISTERED "TAPRABUNDA" TRADE MARK.



OFFICES AND DUTY PAID WAREHOUSES.

For Retail at 1s. 8d., 2s., and 2s. 6d.

In Lead Packets, $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., and 1 lb.

Terms of Agency, and Samples of the Tea, on application.

WM. HESELTINE & SON,
56 Wilson Street, and 1 & 3 Earl Street, Finsbury,
LONDON, E.C.

AGENTS WANTED WHERE NOT ALREADY REPRESENTED.

TOWER TEA.

INJUNCTION.

THE HIGH COURT OF JUSTICE, Chancery Division, on the 23rd July, 1887, the case of *THE GREAT TOWER STREET TEA COMPANY, Limited, versus LANGFORD & CO., Plymouth*, was decided. Mr. Justice Stirling (without calling upon Counsel for the Plaintiffs to reply) gave judgment in favour of The Great Tower Street Tea Company, Limited, and granted a Perpetual Injunction, with costs, restraining the Defendants from packing their Teas in the manner complained of, or in such way as would lead the public to suppose they were the Teas of the Plaintiffs.



Tower Tea

Registered Trade Marks, Nos. 44,027 and 43,992.

THE ABOVE TRADE MARKS APPEAR ON EVERY PACKAGE.

THE GREAT TOWER STREET TEA COMPANY, Limited, is resolved to protect its Agents in every part of the country, and has instructed its solicitors to proceed in the most peremptory manner against all persons infringing upon its rights. This valuable Agency is a certain source of income—the public ask for the Tea, and Chemist will prove their standing by pushing it.

TOWER TEA is a standard quality. It is widely advertised. Absolutely NO RISK to Agents.

APPLICATIONS FOR THE AGENCY for the Sale of Tower Tea will have prompt attention.

THE LONDON BROKEN TEA	for retail at	1/8
ASSAM CONGOU, New Season's Whole Leaf Tea ..		1/8
THE LONDON TWO-SHILLING TEA ..		2/0

THE GREAT TOWER STREET TEA CO., LD.
3 JEWRY STREET, LONDON, E.C.

MITRE TEA.

COMFORT & PROLONG YOUR EXISTENCE
BY DRINKING

**MITRE
TEA.**



Mitre "Broken Leaf"	s. d. 1 4
Mitre "Broken Am. Pekoe"	1 8
Mitre "Thrift" (whole leaf)	1 8
Mitre "Kee-Mun" ...	2 0
Mitre "Amgoorie" ...	2 6



**MITRE
TEA.**



Mitre "Broken Leaf"	s. d. 1 4
Mitre "Broken Am. Pekoe"	1 8
Mitre "Thrift" (whole leaf)	1 8
Mitre "Kee-Mun" ...	2 0
Mitre "Amgoorie" ...	2 6

Fac-Simile of Show Card distributed Gratis to all Agents.

Sold by Specially Selected Agents. Wrapped in $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., & 1-lb. Parcels.

VALUABLE AGENCY.

Framed Show Cards, Enamelled Iron Tablets, Posters, Window Transfer, and Handbills with Agent's Name on supplied free. Newspaper and Railway Station Advertisements to suit the requirements of Agents. Applications for Agencies where unrepresented will receive prompt attention. Current and Pamphlet, with Terms, post free.

KEARLEY & TONGE, MITRE SQUARE, **LONDON, E.C.**
ALDGATE,

READ THIS!!!

THERE'S MONEY IN IT.

The following unsolicited Testimonials about the Spring Blossom Ceylon Tea, which may be seen at our office, speak for themselves:—

- No. —One writes on the 16th April, 1888 :—" My customers say that it's the **BEST TEA I HAVE HAD.**"
- No. —On the 10th April, 1888 :—" Our customers **LIKE IT AND RECOMMEND IT.**"
- No. —Another writes, on the 3rd April, 1888 :—" We have got your Tea started here, and it **GIVES SATISFACTION TO EVERY ONE WHO TRIES IT.**"
- No. —Another, on the 31st March, 1888 :—" I find fresh customers every week, and it **GIVES GREAT SATISFACTION.**"
- No. —On the 21st March, 1888 :—" The Tea is **LIKED WELL**, getting fresh customers every day."
- No. —On the 19th February, 1888, a customer writes, ordering Spring Blossom Ceylon Tea :—" I shall make it known as much as possible; they all say **THEY NEVER TASTED BETTER TEA.**"
- No. —Another, on the 25th February, 1888, says :—" I find the Spring Blossom rapidly gaining favour, and **GIVES UNIVERSAL SATISFACTION.**"
- No. —Another, on the 27th February, 1888, says :—" **GREAT INQUIRIES FOR THIS TEA.**"
- No. —A customer ordering six cases of Spring Blossom Ceylon Tea on the 10th February, 1888, says :—" I may say that the customers who have tried it speak in great praise of it, and **WILL HAVE NO OTHER.**"
- No. —Another writes, on the 7th February, 1888, ordering three cases of Spring Blossom :—" The sale of your Spring Blossom Tea is increasing, and appears to give much satisfaction."
- No. —Another writes, on January 9th, 1888, of the Spring Blossom :—" I may for your information tell you that your Ceylon Tea **GIVES GENERAL SATISFACTION.**"
- No. —Another writes, February 13th, 1888 :—" The Spring Blossom Tea is **TAKING WELL** with my customers."
- No. —Another writes, November 21st, 1887 :—" I may add that the sale of your Tea (the Spring Blossom) is **GRADUALLY INCREASING, AND IT IS MUCH APPROVED OF.**"

AGENTS WANTED WHERE NOT REPRESENTED.

Packed in Circular Air-tight Canisters to sell Retail at 2/, 2/6, and 3/ lb.
Teasing Samples and Terms post free, or set of 3 ¼-lb. Samples post free for 2/ in stamps.

CAVE, JOHNSON & CO.

WHOLESALE TEA AND COFFEE DEALERS,
8 LIME STREET, LONDON, E.C.

BLENDING WAREHOUSES—1 FENCHURCH AVENUE, E.C.

Bankers—Messrs. WILLIAMS, DEACON & CO.

Telegraphic Address—"CAVE JOHNSON LONDON."

OVoid CAPSULED PILLS

MCK. & R.

	DOZ. BOTTLES	
	containing 25 PILLS.	containing 100 PILLS.
Aconitine Crystals (Duquesne's)	1-500 gr.	7/ 24/
" " " "	1-200 gr.	7/ 24/
" " " "	1-10 gr.	5/ 16/
" " " "	1 gr.	6/ 20/
" " " "	1 gr.	7/ 24/
" " " "	1 gr.	11/ 39/6
" Compound		7/ 24/
" and Strychnine		7/ 24/
" Strychnine and		
" Belladonna	(See Cut)	7/ 24/
Arsenious Acid	1-50 gr.	5/ 16/
" " " "	1-20 gr.	5/ 16/
Atropine " "	1-300 gr.	7/ 24/
" " " "	1-100 gr.	7/ 24/
" " " "	1-10 gr.	6/ 20/
" " " "	1 gr.	6/ 20/
" " " "	1 gr.	6/ 20/
" " " "	1 gr.	6/ 20/
" Cannabis Indica Extract	1 gr.	7/ 24/
" " " "	1 gr.	9/ 32/
" Corrosive Sublimat	1-30 gr.	5/ 16/
" " " "	1-20 gr.	5/ 16/
" " " "	1-10 gr.	5/ 16/
" Digitalin " "	1-10 gr.	7/ 24/

	DOZ. BOTTLES	
	containing 25 PILLS.	containing 100 PILLS.
In this form the ingredients are not only perfectly preserved, but do not affect the teeth, or offend the palate, and, further, can be conveniently kept out of sight by those who object to be regarded as invalids.		
Elaterine	1-20 gr.	13/ 7/6
Ipecac. Powdered	1/2 gr.	5/ 6/
Iron, Arseniate	1/2 gr.	5/6 8/
Mercury Bim-Iodide	1-16 gr.	5/ 5/
" Proto-Iodide (absolutely pure pre-cipitated)	1/2 gr.	5/ 6/
" Proto-Iodide	1/2 gr.	5/ 6/
Morphine, Muriate	1/2 gr.	7/ 24/
" " " "	1/2 gr.	9/ 22/
Nitro-Glycerin	1-100 gr.	7/ 24/
" " " "	1-50 gr.	7/ 24/
Picrotoxin	1-80 gr.	7/ 24/
Podophyllin	1 gr.	5/ 6/
" " " "	1 gr.	5/ 6/
" " " "	1 gr.	5/6 8/
Quinine, Bi Sulphate	1 gr.	5/ 6/
" " " "	1 gr.	5/6 8/
" Sulphate	1 gr.	5/6 8/
" " " "	1 gr.	6/ 20/
Strychnine. " "	1-60 gr.	5/ 6/
" " " "	1-60 gr.	5/ 6/
" Nitrate (Dipsomania)	1-60 gr.	7/ 24/
Zinc Phosphide	1 gr.	9/ 22/
" " " "	1 gr.	9/ 22/
" Valerianate	1 gr.	8/6 20/

30

SYR. HYPOPHOS. CO., FELLOWS.

CONTAINS THE ESSENTIAL ELEMENTS to the Animal Organisation—Potash and Lime;

THE OXIDISING AGENTS—Iron and Manganese;

THE TONICS—Quinine and Strychnine;

AND THE VITALISING CONSTITUENTS—Phosphorus, combined in the form of Syrup with SLIGHT ALKALINE REACTION.

IT DIFFERS IN EFFECT FROM ALL OTHERS, being highly susceptible to oxidation during respiration, pleasant taste, acceptable to the stomach, and harmless under prolonged use.

IT HAS SUSTAINED A HIGH REPUTATION, particularly in the treatment of Pulmonary Tuberculosis, Chronic Inflammation, and other affections of the respiratory organs. Is employed also in various nervous and debilitating diseases with success.

ITS CURATIVE PROPERTIES are largely attributable to Stimulant, Tonic, and Nutritive Qualities, whereby the various organs are recruited.

ITS ACTION IS PROMPT, stimulating the appetite and the digestion; it promotes assimilation, and enters directly in the circulation with food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; hence it is of great value in the treatment of mental and nervous affections. From its exerting a double tonic effect, and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTE.—CAUTION.—The success of Fellows' Hypophosphites has prompted certain persons to utter substitutes. Mr. Fellows, having examined several of these, finds no two samples identical, and all differ from the veritable, in composition in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of staining the strychnine in solution, and in the medicinal effects.

SPECIAL NOTICE.

Lest any Members of the Medical Profession may be misled by the many specious advertisements of imitators of Fellows' Syrup of Hypophosphites, Mr. Fellows begs to publish the following, viz.—

That he is the sole inventor of the formula of Fellows' Compound Syrup of Hypophosphites, which was discovered and prepared for the first time for his own use in 1865, when out of health;

That the testimonials bear date from the year 1868;

That the genuineness of the early testimonials was certified by Aaron Alward, Esq., M.D., Mayor of the City of St John, Province of New Brunswick, Canada, and the great seal attached on 6th February, 1868; and

That the formula of the Syrup has never since been changed.

Mr. Fellows therefore refers to the printed form surrounding every bottle, where the letters may be found in full.

As these substitutes are frequently dispensed instead of the genuine, Mr. Fellows can only advise that his Syrup should be prescribed in the original bottles, 4s. or 7s., where the distinguishing marks will prevent imposition.

WHOLESALE AGENTS—

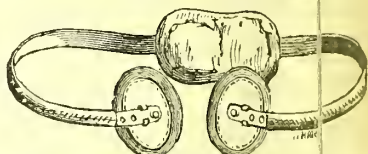
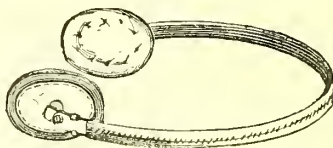
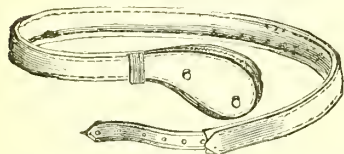
JURROUGHS, WELLCOME & CO., Snow-hill Buildings, London, E.C.



TRUSSES.



THE BEST FOR SHAPE AND QUALITY. FIRST PRIZE, 1879.



MANUFACTURED THROUGHOUT ON THE PREMISE.

GREAT FACILITIES FOR MANUFACTURE AND QUICK DESPATCH OF SPECIAL TRUSSES.

BAILEY'S TRUSSES FOR SCROTAL HERNIA.

BAILEY'S INDIARUBBER TRUSSES FOR INFANTS.

MANUFACTURERS and DEALERS in all kinds of SURGICAL APPLIANCES, WHOLESALE and for EXPORT
Shippers and the Wholesale Trade Supplied on Best Terms and Lowest Prices.

W. H. BAILEY & SON, 38 Oxford St., LONDON

ILLUSTRATED CATALOGUE AND TERMS ON APPLICATION.

Telegrams—
"LINT LIVERPOOL."

THE
LIVERPOOL PATENT LINT CO.,
MARK ST. MILLS,
NETHERFIELD ROAD NORTH,
LIVERPOOL.



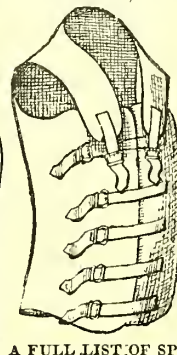
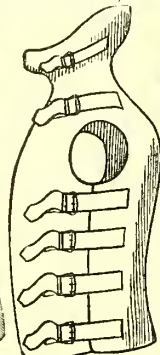
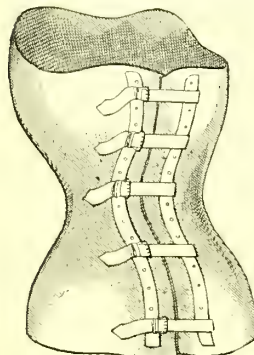
LINT. MANUFACTURERS OF
FLAX, & COTTON,
LINTS,
ABSORBENT, AND CARD
COTTON WOOLS
ABSORBENT, OPEN WHITE, and GRAY,
BANDAGES,
SURGEON'S, AND CARBOLIZED
TOW.

COCKING'S ADAPTABLE PORO-PLASTIC JACKETS AND SPLINTS.

Patentee and Sole Manufacturer, **J. T. COCKING, PLYMOUTH.**

Jacket.

Cervical Jacket, No. 1. Cervical Jacket, No. 3.



INSTRUCTIONS FOR MEASUREMENT.

JACKET

(in cases of slight deformity)

Circumference at axilla.

" waist.

" hips.

Length from axilla to great

trochanter.

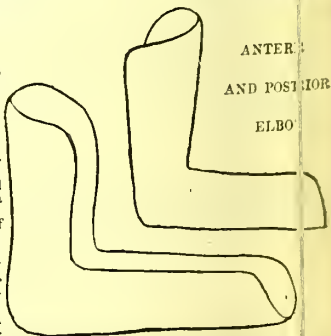
In severe angular cases circumference over apex of curve, position of ditto, and contour should be given; in lateral cases a description of the case.

In all cases it must be stated if

for male or female.

CERVICAL JACKETS.
Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of manufacture be left soft.



A FULL LIST OF SPLINTS AND PORO-PLASTIC IN SHEETS MAY BE HAD ON APPLICATION

The Throat and Voice.

LONDON]

[1888

Chlorate of Potash Tabloids.

FOR AFFECTIONS OF THE VOICE, THROAT, AND RESPIRATORY SURFACES GENERALLY.

By using these Tabloids the drug is effectually brought in contact with the oral mucous surfaces as a continuous gargle, and its specific action made certain. In acute sore throat, Chlorate of Potash "usually relieves the uneasiness in a few hours" (Cohen). "It is used in ulcerated mouth and follicular pharyngitis, and has been employed in croup, phthisis and spasm of the larynx" (Brunton). "Of convenient size, they are beautifully made; and, as they dissolve slowly in the mouth, are well suited to throat affections."—The LANCET.

Supplied in beautifully graven white metal boxes, blue silk label, at 4/ and 8/6 per dozen. Retail prices, 6d. and 1s.

Chloride of Ammonium Tabloids.

The solvent and discutient as well as antiphlogistic powers of Chloride of Ammonium are well known, and have led to its extensive employment, especially in Germany, in cases of sore throat and bronchitis, attended with abundant secretion of thick and tough mucus and phlegm. Physicians will at once appreciate the great advantage to their patients of the local effects of this salt slowly dissolving and coming in direct contact with the inflamed surface. It at once mitigates the cough or irritation, and lessens expectoration. Two or three of the Tabloids will sometimes entirely relieve coughs that have long resisted treatment with ordinary remedies. One may be dissolved occasionally on the middle of the tongue, not near the tip.

Supplied in bottles, at 4/6 and 12/6 per doz. Retail prices, 6d. and 1s.

Sal Prunella Tabloids.

"A popular remedy, sometimes successful in mild cases of incipient inflammatory sore throat, is a small piece of nitre allowed to dissolve slowly in the mouth" (Waring). "An excellent saline for throat cases, having very marked local efficacy when slowly dissolved on the tongue. It is a popular remedy, and for mild inflammatory sore throat its ancient reputation is deserved."

Directions.—One or more (5 gr.) Tabloids should be dissolved slowly in the mouth for the local effect.

Supplied in bottles of 100 at 14/ per doz. Retail price, 1/6.

Tabloids of Compressed Chlorate of Potash with Borax.

The Tabloids afford an agreeable form in which to prescribe Chlorate of Potash and Borax.

Supplied in beautifully graven white metal boxes, pink silk label, 4/ and 8/6 per doz. Retail prices, 6d. and 1s.

Voice Tabloids.

The Voice Tabloids contain COCAINE, CHLORATE OF POTASH and BORAX.

The most agreeable form in which to prescribe Cocaine is in the Voice Tabloids with Chlorate of Potash and Borax.

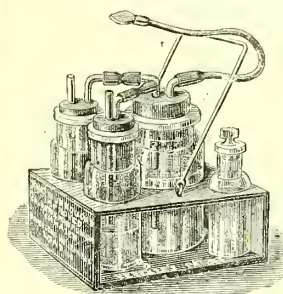
These Tabloids clear the voice and impart to it a silvery tone.

Voice Tabloids supplied in beautifully graven white metal boxes, blue silk label, 8/ and 16/ doz. Retail prices, 1s. and 2s.

Chloride of Ammonium Inhaler.

(VEREKER'S PATENT.)

"The vapour of Chloride of Ammonium removes unhealthy and offensive secretions, and restores the



long diseased or weakened nasal and respiratory mucous membrane to a healthy state, so that in cases of catarrh, where thickening, induration and irritation exist, a most decided improvement is brought about in a short time." In "throat-cough," pharyngeal irritation,

and relaxation and weakness of the throat, it acts as a most effective alternative and tonic to the mucous membrane.

The Burroughs Chloride of Ammonium Inhaler affords perfectly neutral fumes, and is always ready for use.

Dr. FRANKS, Dublin University, says:—"It is the best I have ever used, and I think I have tried all."

Dr. SMYLY, Ex-Pres. Royal College of Surgeons, Ireland, says:—"It is the best Inhaler for Chloride of Ammonium I have met with."

Supplied to the trade at 7/6 each. Retail price, 10/-.

The foregoing prices are subject to our usual discount.

Supplied on favourable terms by all wholesale houses throughout the world.

BURROUGHS, WELLCOME & Co., Manufacturing Chemists, Snow Hill Buildings, London, E.C.

"VASELINE."

NOTICE !! All sizes of our Preparations of Petroleum Jelly can now be obtained **PROMPTLY** from any of the Wholesale Houses.

The fancy word "**VASELINE**" indicates our make of Petroleum Jelly. It is the Registered Trade MARK of THIS Company and cannot be applied to any other goods without infringing the rights of this Company under the Trade Mark Act.

SEND FOR NEW PRICE LIST.

CHESEBROUGH MANUFACTURING CO. CONSOLIDATED (NEW YORK),
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" " " 3 gr., Vinaigrette style (oval bots., 24 in each)	2/9	24/0
" " " 3 gr., 100 in bottle	1/6	12/0
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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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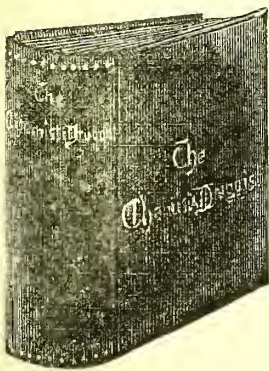
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ADVERTISEMENTS of employers and assistants can be received by us up to the first post on Friday mornings, and will be inserted in the current week's issue.

At a Council meeting of the Society of Chemical Industry held in London on Monday, it was decided that the annual meeting could be held in Glasgow on July 18th, 19th, and 20th.

POST-CARD COMPETITION, No. 4.—We remind readers that we do not admit post-cards into this competition which reach us later than Monday, April 30. What is asked for is a prediction of the first three among the candidates for the Pharmaceutical Council, the election to which is fixed for next month. For fuller particulars reference must be made to the numbers of this month.

THE reading cases which we offer to our subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in a very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, but by any of the carriers, as in the latter case we have to pay for booking.



BRITISH PHARMACEUTICAL CONFERENCE.

A MEETING of the Executive Committee was held at 17 Bloomsbury Square on Wednesday, April 25, at 4 P.M. Present—Mr. F. B. Bengier, President, in the chair; Professor Attfeld, Messrs. Carteighe, Davies, Greenish, Martin, Martindale, Plowman, Ransom; Mr. Umney, hon. treasurer; Dr. Thresh and Mr. Naylor, hon. general secretaries, and J. C. Nightingale, assistant secretary.

The minutes of the previous meeting were read and confirmed.

Letters regretting inability to attend were read from Professor Bentley, Messrs. Conroy, Dott, Groves, Maben, Stephenson, and Symes.

It was announced that the following donations had been received, and the thanks of the committee were accorded to the respective donors: Proceedings of the Illinois Pharmaceutical Association, 1887, and the Calendar of the Pharmaceutical Society of Ireland, 1888.

It was proposed by Mr. Plowman, seconded by Mr. Davies, and carried, that Mr. H. Hutton be appointed local secretary for Bath.

The question adjourned from last meeting, as to the advisability of furnishing proof copies of authors' MSS. to members in attendance at the annual meeting was again discussed.

Ultimately it was proposed by Professor Attfeld, seconded by Mr. Greenish, and carried unanimously, that—"This committee, having fully considered the supply of authors' papers to members present at the annual meetings of the Conference, decides that it is altogether impracticable."

The President announced that he and Dr. Thresh had been to Bath during the present week, and, in company with Mr. S. R. Atkins (Salisbury) and Mr. H. Hutton (Bath), had had interviews with several of the leading chemists there, all of whom gave them a cordial reception and promises of support. They recommended the Grand Pump Hotel as the most suitable for headquarters, and generally reported satisfactory progress.

A number of gentlemen were duly nominated and elected members of the Conference.

DIARY FOR NEXT WEEK.

Secretaries of societies are requested to send early information of approaching meetings.

Monday, April 30.

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Mr. G. Aitchison on "Decoration"—Lecture I.

Tuesday, May 1.

Royal Institution, at 1.30 P.M., Annual Meeting. At 3 P.M., Mr. Walter Gardiner, M.A. Cambridge, on "The Plant in the War of Nature."

Wednesday, May 2.

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Mr. T. R. Ablett on "Drawing, a means of Education."

Thursday, May 3.

Royal Institution, at 3 P.M. Professor Dewar, M.A., on "The Chemical Arts."

Chemists' Assistants' Association, 103 Great Russell Street, W.C., at 9 P.M. Annual General Meeting, and presentation of the Burroughs-Wellcome prize.

Chemical Society, Burlington House, W., at 8 P.M. Messrs. Horace T. Brown and G. H. Morris, Ph.D., on "The Determination of the Molecular Weights of the Carbohydrates." Mr. N. Collie and Dr. Lawson on "The Action of Heat on the Salts of Tetramethylammonium." Mr. N. Collie on "The Action of Heat on the Salts of Tetramethylphosphonium."

Friday, May 4.

Royal Institution, at 9 P.M. Mr. J. K. Laughton on "The Invincible Armada: a Tercentenary Retrospect."

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Indian Section. Surgeon-General H. W. Bellew on "The Injurious Effects of Canal Irrigation on the Health of the Population of the Punjab."

Saturday, May 5.

Royal Institution, at 3 P.M. Mr. Carl Armbruster on "The Later Works of Richard Wagner."

Metropolitan Reports.

FIRE.—The premises, 8 and 10 Fairclough Street, St. George's-in-the-East, occupied by Gates & Hewett, drug-grinders, were damaged by fire on Monday.

QUININE AND IRON TONIC in 1*½* packets is the latest novelty which the curbstone merchants of London have got hold of. The demand for it is extraordinary. Even City men have wedged themselves into the crowds which surround the sellers. The "tonic" hails from Old Kent Road.

SWIMMING.—The S. Maw, Son & Thompson Swimming Club held their first handicap of the season at the Islington Baths, Liverpool Road, on Monday, April 23. The distance to be covered was 88 yards, and three heats were competed, each by four swimmers. H. Litten (7 sec. start) won the first, his competitors having 22, 20, and 7 sec. start; the second heat was won by W. Hasthorpe (6 sec. start), against others with 26, 16, and 2 sec. respectively; C. Sage, scratch, won the third, against others with 20, 19, and 19 sec. start. The final heat is to be swum on Monday next.

CHEMISTS' ASSISTANTS' ASSOCIATION.—A special meeting was held on Thursday night to discuss and express an opinion on the Pharmacy Bill in reference to the branch shops clause. An important item on the programme was the reading of the Burroughs-Wellcome Prize Essay by Mr. A. C. Stark. In regard to the Pharmacy Bill the chairman, Mr. J. E. Saul, made a few introductory remarks, asking the members to speak especially about the branch clause, as the association has already declared for the curriculum. Mr. Millard, in moving the resolution in favour of the Bill, expressed sympathy for the present managers, and would be glad to see a way out of the difficulty, but, in accord with the spirit of the Pharmacy Act, he felt that the branch clause was required. The resolution was in the following terms:—

That the members of the Chemists' Assistants' Association of London, consisting of managers, assistants, and apprentices, qualified and unqualified, having considered the various clauses of the Pharmacy Acts Amendment Bill at present before the House of Commons, are of opinion that in the interest of the public, of assistants, and of pharmacy generally, the Bill should, with all convenient dispatch, be placed on the statute-book.

Mr. Phillips seconded, and a good discussion ensued; but there was not a single word of opposition, and the resolution was unanimously passed. It was also agreed to send copies of the resolution to the metropolitan members of Parliament. Afterwards Mr. Stark read his essay, in which he showed an intelligent appreciation of recent progress in pharmacy.

THE ASHLEY'S BOTTLE COMPANY (LIMITED).—The statutory meeting of this company, formed to work the machinery invented by Mr. Ashley for the manufacture of bottles, was held at the Cannon Street Hotel last week. Mr. G. W. Hastings, M.P., the chairman, expressed great confidence in the future of the company, notwithstanding the unkind comments which had been made upon it; but some of the other speakers were less sanguine. Mr. Keevil, who had visited the works as the representative of a number of shareholders, stated that he found the machine now in operation, with the assistance of two men and a boy, could turn out mineral-water bottles at the rate of one per minute, which was less than was done by the old system of the blow-pipe, under which two men and a boy could produce ten dozen bottles per hour. Mr. Keevil also said that Messrs. Kilner Brothers had shown him a machine-made bottle made by a member of their firm fifteen years ago, on a similar principle to that of the Sykes and Macvay system. This system Mr. Kilner failed to work satisfactorily, and it was dropped by their firm. The machine Mr. Keevil saw at the company's works was not the rotary one which is to come forward, but which, it seems, is still not ready. Several shareholders expressed great dissatisfaction, as they were led to believe from the prospectus that the machine was ready to work.

ALLEGED EMBEZZLEMENT.—A young chemist named George Wyatt, of 15 Hindon Street, Fimlico, appeared before Mr. D'Eyncourt at Westminster on Tuesday, on the charge of

embezzlement to which reference has previously been made. The charge was for embezzling the sum of £16 *6d.* on February 11, 1887, and 8*½d.* on February 15; also for stealing a seal, brass letters, &c. Some time ago he was in the employment of Mr. Frank C. Fernando, homoeopathic chemist, 3 Victoria Buildings, Fimlico. He left, however, and set up for himself, when two or three small articles were discovered to be missing, on which the present charge was based. The prosecutor admitted, in reply to Mr. Dutton, that although he knew where Wyatt lived for months after he left his service, he never made this charge until he set up an opposition business. He (Fernando) had had cards printed describing himself as of the Royal Naval Reserve, although he was never in that service nor in the Royal Navy. The only voyage he ever made was to Colombo and back as a boy, when he was in the mercantile service. This was about twelve years ago. As to his financial position, he admitted that he had paid a composition of 10*s.* in the paid to his creditors on April 5 last year. He had not removed his furniture before his creditors met, but he had sent £10, or 10*l.* worth of sponges for storage to his mother-in-law's house at Walworth. He had not attempted to commit suicide either with pistol or poison; admitted to have taken opium for dysentery. Mr. D'Eyncourt suggested to the prosecutor the advisability of withdrawing the charge. Mr. Fernando said he would do so, and accordingly the summons was withdrawn, the magistrate ordering the articles to remain in the hands of the police. Mr. Dutton said the magistrate had no power to make such an order. Now the charge was withdrawn the case was in exactly the same position as before, and therefore the articles should be in charge of the defendant. The magistrate therefore ordered the articles to remain in the defendant's possession.

CONCERT IN AID OF THE LONDON HOMOEOPATHIC HOSPITAL.—Despite the wretched weather, St. James's Hall on Monday night was fairly well filled with an appreciative audience, who had come to assist at a grand evening concert ("under royal and distinguished patronage") in aid of the London Homoeopathic Hospital in Great Ormond Street, an institution for which it is claimed that it is "constantly doing a great and widespread work among the needy sick," and which certainly has a large and increasing circle of in- and out-patients; last year there were nearly 9,000 of the latter. That Mr. Sims Reeves' name appeared prominently among the performers who had promised their aid may have had something to do with the large attendance, but though the great tenor admitted having derived considerable benefit from homoeopathy, homoeopathy did not (at least on this occasion) receive in return the aid of Mr. Reeves' cooperation, a most unfortunate attack of cold occurring to prevent his attendance. A telegram to this effect was ready Major Wm. Vaughan Morgan, chairman of the hospital, to a disappointed audience, a portion of which vented its annoyance in somewhat undignified hoots and derisive laughter. Madame Nordica, the American soprano, sang two English songs, "Far away from thee" (accompanied by the composer, Mr. Fred. Cliffe) and "Autumn and Spring," and two Italian ones, an "Ave Maria" and "Mia piccirrella," all of which, especially the last named, were loudly encored, a exaction with which the lady declined to comply. Miss Loe Glenn delighted the audience by her magnificent rendering of a song called "True Love" (composed by W. Cohen) and "Heaven's Watchword" (Gilbert Campbell), the latter of which she repeated. Herr Carl Formes, a bass singer, whose fame dates more than a generation back, but who for many years has lived in retirement in the United States, gave two selections from Mozart's "Nozze di Figaro," highly entertaining the audience by the manner in which he rendered these, with a strength of voice which would lead few people to believe that the artist had turned 60. He is a proverbial "threescore years and ten." We understand that this was almost the first re-appearance of Gilbert Campbell in England of Herr Formes. Mr. Gilbert Campbell sang a song by Mendelssohn and "Hearts of Gold," while Mr. Lawton, from New York, appeared in Mr. Sims Reeves' place with a song called "Marguerite." Messrs. Alderman Meyer and Gustav Ernest contributed by violin and piano forte solos and accompaniment to the enjoyment of the evening. We understand that the hospital was benefited by the concert to the amount of nearly 200*l.* net.

Provincial Reports.

Items news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—The medical report for the quarter ended March 31 shows that the total number of attendances was 9,592.

EPSOM SALTS IN BREAD.—"With reference to the use of Epsom salts by bakers, there is a chemist in this town who, to my celestial knowledge," writes a correspondent, "sells considerable quantities of Epsom salts to bakers who put it into bread."

HOW THEY CALL THEM.—"Do you know that large quantities of Lydia water" and "cold potato drops" (dec. aloes co.) are sold by the chemists of the hardware metropolis, and that "conscension" milk is occasionally asked for?"

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—The movement for the alteration of the place of meeting of the association from the Grand Hotel to Mason College has for the present been through. The probability, however, is, that for next session arrangements will be made with the governors of the college for meeting there.

OBLIGE TO CHEMISTS.—From the advertisement column of the *Birmingham Daily Mail* of April 21 we cull the following—

"WE HAVE NO OBJECTION TO SERVE CHEMISTS,

as well as the public generally, but would like them to declare themselves as such, instead of trying to look unconscious of the fact, that they would come boldly into our shop instead of peering so long into the window before they make up their minds.

"THE CENTRAL DRUG STORES PRICE-LIST

is in the hands of Her Majesty's authorities at Somerset House, for revision, on matters requiring stamp duties, and, as soon as received, will be mailed through Birmingham and district.

"In the meantime we quote a few lines to show our scale of prices:—Pure glycerine, in guaranteed bottles, 10*d.*; honey, virgin, 8*d.* per lb.; sponges at all prices and in great variety; very best tooth-brushes, 1*s.*, for 7*d.*; Beecham's patent pills, 1*s.* 1*d.*, 1*s.* 9*d.*; Calvert's toilet soap, 1*s.* 6*d.*, for 11*d.*; Viking beef extract, 1 oz., 8*d.*, 2 oz., 1*s.*, 4 oz., 1*s.* 10*d.*

"Other patent medicines at reduced stores rate.

"Central Drug Stores, Old Square, Corporation Street, Birmingham. Near the Grand Theatre."

BRADFORD.

THE EXTRAORDINARY POISONING CASE.—The adjourned inquest in reference to the death of Lily Holgate (11), who died at the Bradford Infirmary, on Sunday, March 25, as was supposed from having taken a quantity of carbolic acid, was resumed on Tuesday. Evidence was given as to the finding of bottles and jars at the house of the deceased's father, and two or three druggists who were called said they had no recollection of having sold anything on a Sunday night to deceased father. Other evidence was directed to throw suspicion on the father, and the inquiry, which occupied the whole day, was concluded by the jury returning a verdict of "Wilful Murder" against the father of deceased.

NORWICH.

A HALF-HOLIDAY FOR CHEMISTS.—The chemists of this town are agitated at present regarding a proposal to make every Thursday afternoon a half holiday. It has been suggested that the leading chemists of the town should call a meeting of the trade to consider the matter, and those who do not consider themselves the men of light and leading respectancy.

NOTTINGHAM.

THE PHARMACY BILL.—The following letters have been received from the borough members, in reply to the resolution forwarded from the meeting of chemists held at the Milton's Head Hotel, reported last week:—

House of Commons, April 13, 1883.

DEAR SIR,—I beg to acknowledge the receipt of your letter and the copy of resolution with reference to the Pharmacy Bill. You are probably aware the subject is exciting a great deal of attention from different views being taken as to the justice of some of the provisions. I can assure you the matter shall have my careful consideration.

I am, yours faithfully,

ARNOLD MORLEY.

19 Buckingham Street, Strand, W.C.,

April 13, 1883.

DEAR SIR,—I have received your letter and statement with regard to the Pharmacy Bill. For many years the subject has been one of contention, and even now there appears to be no immediate prospect of its being settled. In my experience of legislation of this kind, where new examinations have been imposed upon an industry that has been long in existence, it has always been the custom that those who served in it for a number of years—the limit being mutually agreed to—should be exempt from new examinations. I should think your friends would not object to a similar solution of the difficulty in the present case. I am, yours truly,

H. BROADHURST.

House of Commons, April 19, 1883.

DEAR SIR,—I must apologise for the delay in replying to your letter of the 12th, with copy of resolution passed by the chemists and druggists of Nottingham in favour of the Pharmacy Act Amendment Bill. I need hardly say I will give every attention to the opinion of my constituents of this trade so unanimously expressed; but it appears to me at first sight that hardly sufficient consideration is shown for the long experienced, steady-going, and careful men who have carried on the trade for years without making any serious mistake, and who may yet be quite unable to "cram" for an examination late in life. The terms of the Bill, however, in this respect, seem rather vague and indifferent, and perhaps this objection does not really exist. However, if there is any modification required, it will no doubt be done in committee, and I do not think the second reading will meet with much opposition. Yours faithfully,

H. SMITH WRIGHT.

SCOTLAND.

ELGIN.

THE CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION held their fourth annual business meeting on April 20, when the Committee's report was read. The treasurer's statement showed that the Society had a larger balance than ever before, although the expenditure had been greater than in any previous session. Three new members were enrolled. The appointment of office-bearers was deferred.

Pharmaceutical Society of Great Britain.

THE Board of Examiners for Scotland met at Edinburgh, on April 16 to 19, for the purpose of conducting the

Minor Examination.

THE following gentlemen were successful:—

Adamson, John Robert, Newcastle-on-Tyne	Johnstone, William Hope, Edinburgh
Bennett, Albert, Leeds	King, Frederick, Edinburgh
Blyth, John, Leith	Lane, Frederic John, York
Bottomley, William, Halifax	McAllister, Robert Dempster, Kilmecraggan
Clelland, Henry, Belfast	MaeEwan, Walter, Newport, Fifeshire
Dakers, John J., Newcastle-on-Tyne	McKenzie, William Graham, Edinburgh
Elliot, William Marshall, Edinburgh	Morris, James Kneeshaw, Scarborough
Ferrie, George Thomas, Edinburgh	Millar, James Herd, Edinburgh
Fowler, George Ross, Forfar	Peebles, Thomas Smith, Lochec
Glendye, James, Glasgow	Smith, William, Glasgow
Gaddies, Andrew, Sillith	Walker, David, Edinburgh
George, John David, Edinburgh	Wilkie, John Pronfoot, Edinburgh
Greig, John, Belfast	Williams, William Pierce, Liverpool
Halsted, Arthur Walter, Burnley	Wolfendale, Richard, Barton-on-Trent
Harley, Thomas, Glasgow	
Holmes, Thomas Mason, Bowness-on-Windermere	
Hughes, David, Holywell	
Hunter, John, Paisley	

Pharmaceutical Society of Ireland.

A SPECIAL meeting of the Council of the Society was held on Friday, April 13. Present: The President, Mr. J. E. Brunker, M.A., in the chair, Vice-President (Mr. Draper), and Messrs. Allen, Hodgson (treasurer), Grindley, Wells, McCormack, Hayes, and Beggs.

THE IRISH PHARMACY BILL.

The PRESIDENT said that while the Council were sitting on the occasion of the last meeting a telegram arrived asking an immediate reply to a communication from Messrs. Clay & Close, of London, in reference to the Society's Amendment Bill about to be submitted to Parliament. The standing orders had to be suspended and the business dealt with, and he would now ask the Registrar to read the portion of the minutes of the last meeting which related to the subject.

Mr. FERRALL read an extract from the minutes, and also some letters since received.

LORD MILLTOWN'S VIEWS.

The PRESIDENT said they had now before them a full statement of Lord Milltown's views. Some of his suggestions were very important, but others were purely formal and arose out of the language of the draftsman. It would expedite business to dispose of the latter at once. First, as to the preamble of the Bill. Lord Milltown's observations on that point were as follows:—"Lord Milltown thinks this is unnecessary and apt to be misleading. If any preamble at all, it should commence with the last clause (reciting expediency), and this to be altered sequentially. The better way, he thinks, would be to put this preamble into a short statement of objects outside and inside Bill." Then as to clause 1, "His lordship thinks that the short title should be 'Pharmacy Act (Ireland), 1875, Amendment Act, 1888.'"

On the motion of Mr. Allen it was agreed that the preamble should be amended as suggested by Lord Milltown, and that the short title of the Bill should be as suggested.

The PRESIDENT said it was suggested by Lord Milltown with respect to clause 3 of preamble as to the word "poisons," that the Act 33 and 34 Vict., chap. 26, might be incorporated, and that then the word "poisons" would need no interpretation. A statement in the Bill as to the meaning of a "statutory declaration" he considered surplusage.

Passing over his suggestion with respect to clause 5, subsection 2, for the present, he considered, with respect to subsection 3 of that clause, that a fee of two guineas to the treasurer for registration under the Act would be too high. As to clause 6, he only suggested the substitution of the word "section" for the word "enactment" in a particular place. In relation to clause 7, his suggestion was that the annual fee of 10s. 6d. proposed by the clause should be reduced to 5s. The object of the fee was to pay the expense of forming and keeping up a register.

The VICE-PRESIDENT: Pass that over for the present.

The PRESIDENT said clause 9 of the Bill proposed to enact that "from and after the 1st December, 1888, it should be unlawful for any person to assume the title of 'Registered Druggist' in any part of Ireland, &c." Lord Milltown asked why the date selected should not be "the 1st January, 1889?" He (the President) thought that the proper way of expressing the limit would be "from and after the passing of the Act." As to clause 11, Lord Milltown said that the authority of the Government should be obtained for any enactment that the inspector of weights and measures should be a prosecutor. As to this, there had been a mistake on the part of the draftsman. He had drafted the clause to the effect that it should be the "duty of the inspector of weights and measures"—to whom in each year the Registrar should send a printed copy of the register of pharmaceutical chemists and of registered druggists—"to prosecute" any person in his district committing an offence against the provisions of the Act. The decision at which the Council arrived years ago was, not that the inspector of weights and measures should "prosecute"—for he (the President) did not think the Government would allow such a duty to be thrown on him, or that such a duty should be entrusted to him—but that he should "report" any infringe-

ment of the Act that came to his knowledge to the Registrar. He (the President) proposed that the clause should run as follows:—"It shall be the duty of such inspector to report to the Registrar any person within his district committing any offence against the provisions of the principal Act and the 33rd and 34th Victoria, chap. 26 (the Poisons Act), and to assist the Council in prosecuting to conviction any such person."

Agreed to.

The PRESIDENT said that as to clause 14 it was suggested that the words "or proprietors" should be inserted after every repetition of the word "proprietor."

Agreed to.

The PRESIDENT said Lord Milltown's observations as to clause 17 was that "if part of the penalties recovered under this section are to be paid to the inspector, this clause is inconsistent with clause 11." But as they had amended the latter clause there would be no inconsistency, because the inspector, as the informer, would be entitled to one-third of the penalty under section 36 of the principal Act. In connection with section 18 of the Bill it was suggested that it should provide for the incorporation of the Sale of Poisons Act (Ireland) and the Pharmacy Act (Ireland), 1875. The object was to provide a definition of a poison. If the change should be thought important by Lord Milltown, the Council would raise no objection; but they thought their own form of provision the better one.

Mr. ALLEN moved a resolution formally approving of the amendments already assented to; and it was seconded by Mr. Hayes and unanimously passed.

INSISTS ON A MODIFIED EXAMINATION

The PRESIDENT said clause 5 of the Bill was as follows:—"Every chemist or druggist practising as such in Ireland on his own account before the 1st January, 1887, shall be entitled to be registered as a druggist under this Act on complying to the satisfaction of the Council with the following provisions, that is say:—He shall on or before the 1st of December, 1888, make application in writing to the Council to be registered under the provisions of the Act. Such application shall be accompanied by a statutory declaration of the applicant that he was practising as a *Chemist or Druggist* on his own account in Ireland prior to the 11th August, 1875, that he was practising as a *Chemist and Druggist* on his own account and styling himself as such prior to the 1st January, 1887, giving the name of the place where he carried on such practice, and by statutory declarations from legally qualified medical practitioners, registered as such, that the applicant had carried on such practice on his own account—and then it provided that the Council might either require further evidence on the subject, or dispense with the statutory declarations and take other sufficient evidence in lieu of them. The comment of Lord Milltown on this was as follows:—"This he does not clearly understand. Why should a distinction be drawn between those practising prior to 1875 and those prior to 1887? If there is any reason for such a distinction such reason does not appear. The further objects to this sub-section (2) on the ground that it will include many men who have acted in contravention of the Act of 1875 and may not be properly qualified. In his opinion a modified examination of all those who have acted in business since 11th August, 1875, should be made essential, and he can support no other plan." With regard to the first part of this objection the title "Chemists or Druggists" occurred in section 31 of the principal Act, and consequently had to be retained in the amending Bill in order to secure the rights of those who were protected by that section of the original Act. As to those who had gone into business after the passing of that Act, the right of registration was proposed to be confined to *bonâ-fide* "Chemists and Druggists" who had commenced business after 1875 on their own account and who styled themselves as such; and to exclude grocers, ironmongers, and others who since the same date had added to their businesses that of druggists and commenced the sale of poisons.

Mr. HAYES: Would it not be a wise thing for two members of the Council who are familiar with the working of the Act in Ireland in the past to go to London and have a conversation with Lord Milltown?

Mr. WELLS: I think what Mr. Hayes suggests is what should be done. Lord Milltown never had a word conver-

sation about the Act with anybody connected with the Society. I believe that if the President went over and saw him he would be able to clear his mind of a whole lot of those points, and then probably he would see matters as we do, and we would have no further difficulty.

The PRESIDENT: So far as several of these clauses are concerned, I do not see any difficulty in meeting his objections at once.

Mr. WELLS: He means that every man who now has a shop, who was not in business when the Act of 1875 passed, must pass a modified examination?

The PRESIDENT: Yes. As I understand him he puts the bona fide apprentice on the same footing as the man who was actually in business before 1875. We would raise a storm of opposition if we did not afford an opportunity of getting registered to men who came into business since 1875.

Mr. WELLS: Some men who had not the necessary qualification were honourable enough not to go into business. Others did; and are you to give the latter an advantage over the honourable men?

The PRESIDENT: I think Lord Milltown's suggestion that those who have acted straight in the face of the law should be required to pass an examination is a very proper one. I propose that sub-section 2 shall read in this way:—"No chemist and druggist who has commenced business on his own account between August 11, 1875, and January 1, 1887, and no person who was an assistant or apprentice in 1875, shall be entitled to be placed on the register of registered druggists, unless he shall have been examined with respect to his knowledge of: (1) The English language; (2) arithmetic; (3) elementary chemistry; and unless he has a practical knowledge of, and is able to distinguish by their appearance and suitable tests, the various drugs and poisons and poisonous substances in general sale. The rules affecting such examinations to be approved by the Lord-Lieutenant in Council. I include the apprentices and assistants, whom Lord Milltown wishes to have an opportunity of being placed on the register. I move that these amendments be adopted.

Mr. ALLEN seconded the motion, which was unanimously agreed.

The PRESIDENT: Then he requires us to register men at a nominal fee.

Mr. FRYES: The examination would be included in the fee.

The VICE-PRESIDENT: Leave in the two-guinea charge, and let it include the cost of the examination. He tells us that they must all pass a modified examination, and at the same time he says that the registration fee must be nominal. That is not logic. I propose that the two-guinea fee be retained, and that it include the cost of the examination.

Mr. GRINDLEY seconded the motion, which was unanimously read to.

The PRESIDENT: The next objection is as to the annual fee of 1 6d. He thinks it ought to be reduced to 5s.

Mr. EGGSON: A fee of 5s. will not cover the expense of printing and posting the register.

Mr. FRYES moved—

"That the Council does not consider 10s. 6d. too much as the fee for the registration of pharmaceutical chemists and registered druggists, as the expense of registration will be greatly increased, and they do not think any member will object to such a fee."

Mr. ALLEN seconded the motion, which was passed unanimously.

PARTNERSHIPS AND STORES.

The PRESIDENT said that clause 10 of the Bill proposed to make it unlawful for any registered druggist to allow a portion of his premises to be used for dispensing prescriptions, under a penalty of 5l. As to this, Lord Milltown asked: "Does this section take away any of the powers which druggists had previous to 1875? or does it impose on anyone?" Lord Milltown did not understand the difference between the positions of druggists in Ireland and in England. The right to compound medical prescriptions was strictly limited by the Irish Apothecaries Act of 1871 to licentiate apothecaries up to 1875; and druggists in Ireland stood on a different footing from those in England, where no such limitation as to dispensing existed. The object of the clause was to check an evasion of the law which was known to exist. A druggist nominally let off a counter other portion of his shop to an apothecary or

pharmaceutical chemist, under whose authority and supervision the dispensing of prescriptions was supposed to be carried on, the business of the establishment being nevertheless conducted as one business. Clause 12 of the Bill stood as follows:—"Every person lawfully keeping open shop and selling and retailing poisons or dispensing and compounding medical prescriptions shall personally manage or conduct such shop, &c, or shall employ for the purpose as assistant or manager some person qualified according to law to keep open shop as aforesaid." Lord Milltown proposed that that section should commence—"Every person or persons keeping open shop"—so as to cover the case of partnerships and companies. He also asked that the word "lawfully" should be omitted from the clause; and he observed as follows:—"This would render the latter part of the section providing for the case of partners, and the whole of the 13th section unnecessary." In any case the provisions of the 13th section are considered by him to be so impracticable that he makes their excision a condition precedent to his undertaking charge of the Bill.

Mr. WELLS: My view is that it would be better for us to withdraw our Bill for the present rather than yield this point.

The VICE-PRESIDENT said there was a large class of persons to whom they wished to do justice, and therefore they should go on with the Bill.

Mr. WELLS: If that clause is modified as he asks, Arnott & Co. might employ me to conduct a druggist's business.

The VICE-PRESIDENT: That is the law now.

The PRESIDENT: The highest Court in the kingdom has affirmed that it is the law.

Mr. GRINDLEY: By a quibble.

Mr. ALLEN: Whether it is a quibble or not, such is the law.

Mr. WELLS: I think we are in a better position as we are at present.

The PRESIDENT: All over the country there are bogus proprietors of establishments who merely give their names, and have businesses conducted by unqualified persons. Clause 12 would prevent that.

Mr. WELLS: The object is to shut the door on illegal men now, so that qualified men may start.

The PRESIDENT: I am satisfied that unless we can get the present Bill, or something like it, carried, the Society may as well pull down its blinds and stop.

The VICE-PRESIDENT: We have hardly a representative meeting, and I would suggest to you to put off the consideration of these two clauses.

The PRESIDENT said the 13th clause of the Bill proposed to enact that corporations and co-partnerships should be liable to penalties for selling poisons or keeping open shop unless every member of the company or corporation was a duly-qualified pharmaceutical chemist. That was virtually a proposal to repeal the law of the land as declared by the House of Lords. He could only say what he had always said, namely, that while he would like to see the clause made law, he was not prepared to sacrifice the Bill for it. The note which he had made on Lord Milltown's objection was as follows:—"While adhering to the opinion that such a clause is equitable in the interests of pharmaceutical chemists, who are compelled to pass through a long and expensive preparation for the exercise of their calling, the Council does not see its way to let useful legislation fall through by insisting on the clause. Accordingly, in deference to Lord Milltown's strongly-expressed opinion, it consents to the clause being omitted."

The VICE-PRESIDENT: The omission of the 13th section of the Bill will simply leave the law as it stands now.

The PRESIDENT said that even with the omissions suggested by Lord Milltown, the 12th and other clauses would enable them to ascertain the names of the proprietor, or proprietors, of every establishment, and every company or co-partnership, and to compel them under penalties to employ properly qualified persons to conduct pharmaceutical business and the sale of poisons. They would get at numbers of cases that they could not reach at present.

Lord Milltown's suggestion of the words "or proprietors" after each repetition of "proprietor" in clause 12 was agreed to; but on the motion of Mr. Hayes, seconded by Mr. Allen, it was resolved that while clause 12 should begin "person or persons," the word "lawfully" as occurring in that clause should be retained.

The PRESIDENT moved that his note upon clause 13, entered with a consent to withdraw it, be adopted; and Mr. HODGSON seconded the motion, which was unanimously agreed to.

Mr. HAYES suggested that two members of the Council should wait on Lord Milltown.

The VICE-PRESIDENT: I do not think there is anything you want from him that you would not get by correspondence.

The PRESIDENT: Certainly if I had some conversation with him I might be able to enlighten him on many points. If he expresses any wish for an interview we shall be ready to see him.

Mr. Edward McCreery Shea Hill, of Dublin, and Mr. William George Whitney, of New Ross, were elected members of the Society.

Some other business was postponed till the next meeting. The Council then adjourned.

THE COURSE OF PRACTICAL CHEMISTRY.

The President wishes to correct a statement which appeared in the report of the last monthly meeting. The old regulations relating to attendance on a course of practical chemistry will still be in force in the case of all candidates whose certificates shall have been issued by the schools before July 1 next.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

EXPLODING AGAIN.—Another accident has occurred in Messrs. Brin's works at Passy, where a young man was, on Good Friday last, killed by the bursting of an over-charged oxygen gasholder. This time it was a commonplace gas explosion caused by mere carelessness. A gas-heating stove had been newly set up in the office, and last Thursday one of the clerks turned on the gas while another went for a match. As may be expected, an explosion resulted when the light was applied. The clerk and an accountant were dangerously injured, the windows blown out to splinters, and the building was set on fire.

DISINFECTION OF PAWNED BEDDING.—At the Mont-de-piété, the Parisians' venerable "uncle," many articles of bedding are pawned, and, as may be expected, it is often after long sickness or some death in the family that the owners part with them temporarily. Hence contagious diseases may be spread by such bedding, which is brought to the Mont-de-piété without any wrappers, if all were piled together in the storerooms without precaution. The administration last summer procured steam-pressure disinfecting ovens, and since then has disinfected 9,187 mattresses, 3,090 feather beds, 8,343 pillows, and 8,165 blankets and coverlets. As the purification is known to be perfect, it would almost tempt one to now and then pawn one's bedding for the sake of the thorough cleansing.

SOME INCIDENTS OF THE BOULANGER TROUBLES.—Last Saturday afternoon a band of students numbering several hundreds organised to "demonstrate" against General Boulanger, and after gathering recruits from the Faculties and the School of Mines, proceeded to the College of Pharmacy for more adherents. All the while they were singing various anti-Boulangist songs and calls, the most popular of which appeared to be "Conspuez Boulange" (Spurn ye Boulange), sung on the same tune as the "Conspuez Chatin" of two summers ago, only the final "r" of the name has to be dropped to make it a dissyllable for the sake of measure. At the College the manifestants were joined by some third year's students, and as they were leaving the building and turning down the Avenue de l'Observatoire, a waggon of the *Lanterne* newspaper bore down on them, and, it is said, attempted to rudely drive through the dense crowds of young men. As the *Lanterne* is a Boulangist and anti-student paper, and the young men feel at home in the Latin quarter, this was a little too much. The waggon was stopped, and the men ordered to apologise and shout "A bas Boulanger!" They refused, and whipped their horse; but they were held fast and made to

come down, pale with fear, while the students quietly unhitched the horse, upset the waggon to dump out its contents and set them on fire. They proved to be "Le Bossu," a serial publication undertaken by the newspaper. At the same time the young men did their best to turn the waggon into kindling wood, but as the vehicle was an iron one they only succeeded in breaking their canes and umbrellas over it. Finally, having smashed all the glass about the waggon, they proceeded to other exercises, while some of the young men good-naturedly helped the drivers to hitch on the horse again. What to place afterwards has probably been related by the newspapers—the facts besides belong to the domain of politics but the conclusion deserves brief mention. A student meeting was called for Monday evening, April 23, at the *Salon de l'Ermitage*, and a very large attendance answered the invitation. The small hall, barely sitting 150, held about 80 young men standing, while almost as many were packed in the little garden outside. The object of the meeting was to hear the report of delegates and ratify their promises to Premier Floquet. The students in their organising, debating and maintaining order showed considerable wisdom and good sense. It was known that attempts would be made to break up the meeting by various disturbances, but the young men decided from the first not to heed interruptions and to let them pass in contemptuous silence. Several times was the fortitude brought to the test. Once it was a shout of "Vive Boulanger!" from a corner of the hall; next various not contradictory; and, most galling of all, from a rear house an abominable cornet began braying "En revenant d'la R'vue, the Boulangist rally-song. But the young men stood firm and every time after short interruption order was restored and business proceeded with. The delegates' report, now of public notoriety, was that during their interview with Minister Floquet, after exposing their grievances, they had received promise that if the students would pledge themselves to make no demonstration on their side of the Seine, M. Floquet would take it upon himself to prevent on the other side all kinds of street manifestation. The students accepted the committee report, and unanimously pledged themselves to abstain for a week from all demonstration. Before adjourning a permanent committee was elected, composed of two from the Faculty of Sciences; three from the Faculty of Letters; five, School of Medicine; four, Law School; one, School of Mines; two, Central School; two, School of Pharmacy; and one, School of Beaux-arts. Finally an order was passed from mouth to mouth to avoid all cries on leaving the hall, and all dispersed in a most orderly manner. Minister Floquet has kept his pledge, and for the present order reigns again in the Latin quarter.

Personalities.

MR. EDWIN STUBBS, late of Hull, has purchased the business of Mr. H. G. Waters, of Emsworth.

MR. G. MOOR has purchased the branch business of Mr. W. Corbett, formerly Sandiland, St. George's Square, Drogheda.

WE regret to learn that Mr. Thomas Heath, chemist and druggist, of High Street, St. Mary Cray, was suddenly stricken with paralysis on Thursday last.

MR. W. CORBETT, of Bromsgrove, has succeeded to the partnership of Mr. Hughes in the firm of Messrs. Hughes Wyatt, Stourbridge.

MR. W. PRICE, of Abergavenny, who recently retired from the drug trade, has taken a farm in the neighbourhood of Ledbury, Worcestershire.

TESTIMONIAL TO A CHEMIST.—Mr. Evan Williams, who for some years carried on business at 161 New Cross Road, S.E., was presented on April 12 with a handsome illuminated testimonial on vellum, signed by the leading clergy, gentry, medical practitioners, and residents at New Cross, as a token of their respect. Owing to ill-health Mr. Williams has been obliged to dispose of his business with a view to settling in California. Mr. Josiah Jones, formerly assistant to Mr. Cornell, of Ipswich, has succeeded to the business formerly carried on by Mr. Williams.

DRUGS AND THEIR COMMERCE AT VARIOUS TIMES.

By F. HARWOOD LESCHER, F.C.S.*

making a few selections from the almost inexhaustible mine or treasury of interesting facts about drugs, I propose to take a few glimpses at the substances used to cure disease at different times, and to carry you back in spirit to the social life of various countries. And I propose to treat the subject from a rather novel point of view—the commerce.

Commerce is the main-spring of our whole lives. In its simplest form it is the negro catching game that he may live and changing his surplus game for something else, and afterwards collecting gums, &c., for a living. Its more complex form is shown in the great trading companies that have carried the British flag all over the globe, bringing drugs from everywhere to our markets.

Mr. Webb recently interested us in the insect friends and foes of the plant: I am speaking now to an audience that are only the friends of drugs, as our living and that of our families depend upon them. Drugs of some sort were a necessity from all time. Man's endeavour to help sickness by medicine is part of man's life; it is an instinct second only to that of obtaining food. We come upon allusions to drugs everywhere, and their commerce, as investigated by Dr. Hanbury and others, is really the history of the world's commerce.

Commerce procures drugs for us. The nomad tribes dig for rhubarb on the bleak steppes of Tartary for a livelihood; the sailor braves the storm, and we all here at home work hard, simply to get food, for a livelihood; but from all this commercial work, the sick man in London recovers health, and lives. It is true we are dependent on the lowest class of shepherds, Hottentots, and Indians in South America, and therefore the quality of some drugs suffers from bad collection; but this is improving, and the cultivation of cinchona in Java, cardamoms in Ceylon, senna in Tinnivelly, is giving us drugs of first-rate excellence.

I propose to take three main epochs of the commercial history of drugs. Firstly, the caravan era, from the earliest time; secondly, the commercial position of the trading cities of Europe in the middle ages; and thirdly, mention of drugs in modern time.

Drugs have been used from the earliest time: probably the earliest records are those of rhubarb, mentioned in a Chinese book on medicine, 2,700 years before Christ; old hieroglyphics on some Egyptian monuments, 1,700 years B.C. represented gum trees, and the collection of gums, probably in the very districts above Kartoum that fail us now, and have therefore raised the price from 40s. to 20% per lb.

The earliest trade was perhaps that of the caravans that went from Persia to India and China, and some insight into the trade of the Phœnicians is given us at the time of King Solomon—especially in the natural gums of Arabia, as myrrh and glibanum. Myrrh, aloes (the wood is meant), and cinchona are mentioned as perfumes in the book of Proverbs. Accot was used as an arrow-poison by the Chinese. Skill in medicine accompanied civilisation; we find both (long after they existed in China and Egypt) among the Greeks and Romans, and with this skill a demand for drugs. One of the earliest mentions of proprietary medicines is applied to the Berberis from India, or Rusot, used by the Greek doctors for ophthalmia, under the Greek title of "lycium." This was sold in little jars, and is met with now in collections, known as "Jason's Lycium," the "Lycium of Heracles," &c. Indian princes sent the famous precious camphor of Borneo as tribute to Chinese Emperors—that sort termed "a most rare perfume," found in little solid pieces in the wood, and worth its weight in gold.

Opanum was known as incense, or frankincense, long before the Christian era; it is mentioned as tribute paid to King Darius, and as among the spoils captured by Alexander the Great. Aloes from Socotra was known to the Greeks 400 years B.C.

After the decay of civilisation in Rome, when the fertile Roman campagna was devastated by hordes of Goths and Huns, and given over to malaria, at a time when wolves roamed over the forests round the Thames, there arose a high state of civilisation, and a celebrated school of medicine, and therefore of pharmacy and drugs, in Arabia. In the tenth century scammony and aloes from Socotra were recommended to King Alfred the Great in a letter from a patriarch of Jerusalem; ginger is named in Anglo-Saxon leech-books. In the "Arabian Nights" we have several insights into the pharmacy of that period—the magician in Aladdin asked a druggist for a certain potent poison, which the latter said that he would not put up until he had been shown a piece of gold! This appears to have been the only poison regulation in force in Arabia at that time.

During the Roman Empire there was a large commerce of drugs from India, and custom duties levied on them. At the Roman Custom House at Alexandria, duties were levied on ginger and cardamoms, amongst other drugs, coming from India. Opium, from Asia Minor, is mentioned as a medicine by Pliny, though it was only introduced into India about 950, and the habit of smoking it in China about 1650. The Arabian physicians used Bish, or East India aconite, and also galangal, and first used senna about 1000, and introduced it into Europe. They used the pods, not the leaves.

About this time, viz., 1000 A.D., from Arabia and also from Constantinople, the centres of civilised life, radiated caravan routes, through Syria, and thence right along the north of Africa, crossing at Gibraltar into Spain. Other caravan routes led up from Italy; the Levant was the centre of trade, Acre, in Palestine, being one of the most important depôts of drugs. Medicine, or leechdom, as it was called, was then at a very low ebb in Britain and Northern Europe. The common domestic herbs and indigenous plants were used, but charms and so-called witchcraft were even more employed in disease—as for traces of commerce in drugs in England, they scarcely then existed.

In the beginning of the ninth century, about 810, that great monarch Charlemagne, at the same time Emperor of the West and King of the Franks, ordered many drugs to be introduced from Italy into the convent gardens in Central Europe and on the imperial farms. Among these were almond trees and aniseed. Charlemagne possessed that universal genius which looked to everything, small as well as great; like Napoleon, who, during his Russian campaign, sent to Paris the scheme for the management of the Theatre Français, which exists to this day.

II. The second period in the commerce of drugs shows us the rise of the trading cities of Europe during the Middle Ages. As the tide of knowledge and civilisation flowed westward, the centre of trade moved gradually from the Levant down the Mediterranean. Instead of caravans journeying from Persia with drugs, we have ships and navigation coming more into play, and then the great Italian trading cities became the centres of commerce. Pisa, and Genoa, and Venice received drugs and spices and gums from the East, and sent them by the great routes, scarcely worthy of the name of roads, north and west, and some by sea to Britain. Then, to plunder these we read of robber chiefs of the Rhine and pirates of the Barbary coast; but the profits of the traders could bear these tributes, and the trading cities of Italy grew rich and powerful. In the thirteenth century on mention is made of oranges and lemons in letters about the cultivation of land in Sicily. Cloves and saffron were the same price in England, namely, 10s. per lb., which was more in value than a cow. Saffron, cultivated in Persia and then in Italy, was introduced into England about 1350, under Edward III., and cultivated; and for two centuries afterwards English saffron was exported to France. It is from the cultivation of this drug that Saffron Walden takes its name. Saffron was used in Germany then as now: in Nuremberg, in 1444, a man was burnt alive for adulterating saffron, and his saffron was burnt with him! In this same century we come upon the first mention of castor oil. The plant was cultivated by Albertus Magnus, Bishop of Ratisbon; but the expressed oil from the seed has only very recently been known—not before the eighteenth century, when it came from the West Indies and was worth 7s. per lb. Its cultivation in India, whence so much comes now, dates from much later than this. Mace was worth 3s. 7d. per lb., and cumin seed 2d. per lb. in England in the thirteenth century, when

* These are of a lecture delivered at a social meeting of the employees of Messrs. Erans, Lescher & Webb, held at the Aldersgate Street School-room, Monday, April 23.

a sheep was worth 1s. 6d. and a cow 9s. 6d. We come upon a very early mention of staphesacre seed, recommended by the physician of one of the popes, to cure vermin in the head.

In the fourteenth century we read of the trading city of Pisa imposing a customs duty on gum tragacanth, and having a large commerce in gum arabic from Alexandria. The Venetians received ginger from India *via* Egypt; long afterwards the Spaniards introduced it to the West Indies. Sugar, from the sugar-cane, originally a native of, and cultivated in, India, was grown about this time on the shores of the Mediterranean; we read of 100,000 lbs. sent by a merchant in Venice to England, the value to be returned in wool, which was at that time our most important export. Colocynth was at this time cultivated in Cyprus, though it was previously known in Spain. Cubebs in the Middle Ages were used as a spice, eaten powdered with meat; John, King of France, in his captivity in England in this century, used them, and also grains of paradise, as a condiment. Even now cubebs are classed as a pepper, and not as a drug, in the French Custom House. About this time we read of French ships sent by the merchants of Rouen from the Port of Dieppe to the West Coast of Africa for ivory and grains of paradise. During this and the fifteenth century we read of drugs from the East, as galbanum and asafetida, reaching England by way of Venice. The Sultan of Zanzibar on one occasion sent the Doge of Venice many loaves of sugar and a like number of boxes of odoriferous benjamin. We hear of a great trading company being in existence in Genoa, called the "Maona," which managed the then important trade in mastic of the island of Scio; to them Columbus, a native of Genoa, wrote, believing that he had discovered this drug in America. About this time we find senna cultivated in Italy. In the Middle Ages rhubarb came from Tartary, *via* Persia, by caravans to Smyrna and Alexandria across the Isthmus of Suez; this transport made it very dear, and it became known in commerce as Turkey rhubarb, from the country whence the European merchants bought it. Long afterwards it began to come overland through Siberia and Russia, and about 1700 the very careful examination and rejection of inferior roots began at the frontier town of Kiachtka, and then the name Russian rhubarb sprang up. Subsequently a wonderful cheapening of the drug was effected by shipping it from the treaty port of Canton; the East India Company took hold of the trade, and it became known as East Indian rhubarb.

Meanwhile civilisation and commerce were moving towards other parts of Europe, and on the shores of the Baltic was springing up a mighty trade. The commerce of drugs is associated with two of the most remarkable confederations the world has ever seen. England played a prominent part in the one, the Hanseatic League; and the other, the East India Company, is perhaps the subject of which English commerce is most proud. Eighty commercial towns of Northern Germany, with Lubeck at their head, constituted the Hanseatic Confederacy. With them were associated four principal foreign factories—in London, Bruges, Bergen, and Novgorod. This league, banded together for mutual defence, and to monopolise trade, was formed in the middle of the thirteenth century (about 1239), and developed rapidly; the towns were all seated on the sea or on navigable rivers. Bruges, in Flanders, was an *entrepot* for caravans between the Mediterranean and the Baltic, and Bergen for the trade of Norway, though not for trade in cod-liver oil—this is a medicine of the present century. In London there were factories or warehouses, a Teutonic Guildhall in Thames Street, and an alderman of the Haunse to settle disputes; there were depôts, too, for wool at Lynn and Boston. The Germans seem to have monopolised most of the profitable English export and import commerce in those days. This league of merchants and trading cities dictated to princes, raised troops, and made war against cities and states. How well this also describes our own East India Company later on!

In this country the import trade in drugs was not large, but it is interesting to note that the first commercial corporation ever known in England had business with drugs; I allude to the Grocers' Company. As early as about 1000 A.D., in Anglo-Saxon time, by the statutes of Ethelred, the Easterlings, or merchants coming from the East to Billingsgate, had to pay twice a year, among other things,

10 lbs. of pepper. From the date it seems plain that they came from the Levant, and not from the eastern shores of the Baltic. About 1180 they introduced such good minted coin, that from them it received the name of *sterling*, and also weight by beam, both known in the Levant. The basis of legal weighing was the pennyweight, the "strong" minted penny, the standard coin of specific value and definite weight. These merchants from the East, dealers in pepper and other drugs and Indian spices, sometimes called Emperor's men, were first mentioned as the guild of Peppers in London about 1180, in the reign of Henry II. The first managed commercial weighing and had charge of the king's beam. They were incorporated as the fraternity of Grosarii, or weighers *en gros*, in 1345, and this guild has remained the Company of Grocers to the present day. In 1447 a patent roll of King Henry VI. gave this company power to "examine and garbel anis, cummin, wormseed, rhubarb, scammony, spikenard, senna, electuaries, syrups, ointments, plasters, and confections, cardamoms, and all sorts of drugs, any wise belonging to medicines, so as not, in the buying of these, to be hurt in their bodily health." They continued to have charge of the public scale, or King's beam, and in 1453 we find them making a charge for weighing "Drugges, draught, ij pence." In 1456 John Ayshefelde was fined, 8d. by this Company of Grocers for "offens don in makyng of untrew powder gynger cynamon and saunders."

The sixteenth century found the centres of commerce shifting westward. In 1505 the Portuguese navigated round the Cape of Good Hope and obtained a share of the trade with India and China in drugs and other produce; the trade from China which had before been met at Ceylon and afterwards on the Malabar coast, by the Arab trade down the Red Sea. The Portuguese about this time were the first to find the country of the cardamom on the Malabar coast of India, and they discovered the true nutmeg plant in the islands of the Indian seas, though it had been known to the Arabs and imported into England long before; a hundred years later the Dutch got hold of the trade of the Spice Islands. The Portuguese at this time founded colonies in India and on the west coast of Africa, which they still hold. The Spaniards, too, were most enterprising, and their discovery of America brought numerous new drugs; jalap and sarsaparilla came about 1550 to Europe. The enormous riches of America probably, however, caused a slackening of Spanish vigour, and about this time English commerce began to assert itself. Under Queen Elizabeth England finally broke from the power of the Hanseatic League and took away most of the privileges of the Germans trading in England; our hardy seamen broke the power of the big galleons of the Spanish Armada; our captains scoured the sea; in 1577 Captain Winter, one of Drake's officers under Elizabeth, was wrecked and found Winter's Bark in the Straits of Magellan. About this time the plan of making incisions in the manna ash, and collecting Manna, as practised at the present day, was begun in Italy.

III. The third or modern epoch in the history of drug commerce is characterised by the rise of the commercial prosperity of England, and is inaugurated by the establishment, about the beginning of the seventeenth century, of the East India Company. This company was founded about 1600, under the name of "The Governor and Company of Merchants Trading to the East Indies." The way in which our glorious arms flowed our persevering trade reads now like a fairy tale. The Portuguese and the French, who were before us, opposed us; the Dutch had risen to a wonderful pitch of excellence both for the amount of their commerce and their skill in navigation, and even in fighting at sea. In 1700 they owned about half the tonnage afloat of Europe. But about 1650 the arms and counsels of Cromwell greatly helped this company, and in the reign of Charles II. they began the tale, of which they afterwards obtained nearly the whole. In their early years we read of their offering at one of the sales gamboge, "a gentle purge"; it was taken out at 5s. They sometimes bought the whole stock of aloes from the Socotra. Later on, they prevented tret being taken for drugs they handled. In 1657 the prices in London were for opium only 6s.; scammony, 12s.; rhubarb, 16s., of the money of that time.

And now new and important drugs were coming into England in large quantities. Copaiba was recommended for curing wounds by the missionaries in the Brazils. The first

colists in Barbados prepared the juice of the aloe they found growing there about 1650. German price-lists of drugs mention balsams of Peru and tolu as coming from America. The Countess of Cinchon, the wife of the Viceroy of Peru, was cured of fever by a bark from Peru, by which Charles II., in 1678, was also cured of fever by Tabor, an unqualified doctor, whom the king made his own physician. The Dutch imported star anise (not the oil) from Manila to flavo-ur tea. About this time the Portuguese brought calumba from their possessions in West Africa, and pareira brava from their colony of the Brazils. From the same source, too, about this period ipecacuanha was introduced into Europe, and described as a wonderful cure for dysentery by Helvetius, the physician to Louis XIV. of France, who later on, about 1720, used pareira brava.

The eighteenth century brings us to modern times. Most of the drugs we now employ were known a hundred years ago, and their commerce was getting more and more into the hands of the English. But the most absurd remedies were still in use, and in a book on "Drugs," by Pomet, the Paris druggist, in the middle of the century, are many curious descriptions. Dragon's blood is well described by one of the authors of those days, as "the tear of a tree, red like blood, the fruit of which is like to a cherry, whose skin being taken off like a dragon's, and hence its name." Gamboge, also, as coming from China, some say scammony coloured with saffron, others ricinus coloured with turmeric." Pomet believed in unicorns, calling them "camphirs" or Arabian wild asses. He recommends the left hind foot of the elk against the illing sickness, or epilepsy. Among curious medicines mentioned in books of repute in the healing art about this time we find the following:—A young man's blood in spring-time; Arian mummy—1 drachm helps coughs—artificial or modern mummy is not so good; elixir of mummy can also be used, spirit of man's brains—1 scruple is a "noble antiepileptic"; a live frog put on the stomach in colic will draw the disease to itself and die. Again: "Note that to cure consumption, take hair and nails of the patient, cut them small, and put them in a hole in the root of a cherry tree, and then stop with clay." Another, to cure the gout: "Take the said hair and nails, cut small, and either give them to birds in a roasted egg, or else mix them with wax, and stitch it to a liverab, casting it into the river again." But civilisation and wealth were taking great strides, and the nineteenth century opened with a growing extension of British commerce. During the wars of Napoleon English merchant ships were conveyed by men-of-war, and we read of the West Indian fleet with pimento, and the East Indian fleet with rhubarb, gun- ginger, &c., safely eluding French fleets. A few new drugs were introduced from the colonies, as buchu from the Hotnots of South Africa in 1821. Steam later on gave a wonderful impetus to English commerce, and the adoption of caloids and active principles has considerably extended the demand for crude drugs at the present day.

The cultivation of medicinal drugs is at the present day one of the most important factors in our commerce. Several thousand bales of Tinnivelly senna, cultivated in the south of India, are imported every year; this senna is displacing Alexandria all over the world. The cultivation of cardamom in Ceylon has, in my recollection, brought down the price from 10s. to about 2s. to 3s.; the cultivation of quinine-yielding barks in Java, Ceylon, and India is of even more commercial importance. Ten years ago quinine was 16s. 6d.; some brands are now under 2s. per cwt, and this is mainly owing to the enormous quantities of cinchona barks produced from the trees grown on these plantations. Other drugs will doubtless in time be cultivated and become more abundant, to the good of the increasing world's population. Some of the drugs that have illustrated my lecture are about two hundred years old, lent me by the courtesy of Mr. Holmes, from the Pharmaceutical Society's Museum. In considering all the above subjects, we must be thankful to divine Providence that has so constituted Nature that we find many remedies for human ailments, and conclude with the words of the Poet Laureate:—

To dip into the future, far as human eye could see,
To see the vision of the world and all the wonder that would be;
To see the heavens fill with commerce, argosies of magic sails,
To see the purple twilight, dropping down with costly bales;
To see my brothers, men, the workers, ever reaping something new,
That which they have done but earnest of the things that they shall do.

THE LONDON CHAMBER OF COMMERCE.

THE chemical trade section of the London Chamber of Commerce held its annual meeting on Wednesday, April 25, at the offices of the Chamber, Botolph House, London, E.C., Mr. Thos. Tyrer taking the chair. There were also present Mr. Wm. G. Blagden, Vice-Chairman, and Messrs. T. G. Adair Roberts, T. P. Morsen, Jas. Robbins, Thos. Bennett, G. B. Francis, Arthur B. Hul, Chas. Umney, Rud. Messel, W. J. Bush, Thos. Christy, Bernard Dyer, R. H. Davies, David Howard, and Wm. Thorp. The minutes of the previous meeting having been read and approved of, the Chairman brought forward the question of the

MANUFACTURE OF SPIRITUOUS PREPARATIONS IN BOND, which, though third on the agenda paper, was by common consent accorded the first place in the debate, as the subject of paramount interest. The Chairman said the present position of the negotiations with the Somerset House authorities on the subject of the repayment of the excise duty on spirituous preparations manufactured in bond was not particularly cheerful. At the very moment when those conducting the negotiations on behalf of the drug trade believed a settlement to be imminent, much unexpected delay arose in the official quarter, finally resolving itself into an apparent desire to again discuss, from a different standpoint, questions which were thought to have been already disposed of. There appeared to be some doubt in the official mind whether after all the authorities were not going to be "done"—in other words, whether, under the guise of an allowance of the excise duty on the spirit lost in the manufacturing process, it was not sought to create a bounty on the manufacture. Under these circumstances Dr. Bell, the official chemist, asked the representatives of the trade whether they were prepared to place in the way of the authorities facilities for estimating the actual loss of spirit in the different processes of manufacture, a request which had immediately brought Mr. Umney to the rescue. That gentleman declared his willingness to allow the Somerset House chemists to visit his firm's works and take whatever steps they thought fit to put the question to a practical test. The Chairman then asked Mr. Umney to inform the meeting what steps the Somerset House people had taken with reference to his offer.

Mr. Umney: We had hoped that it would have been possible to agree with the Excise upon the terms of the allowance before the Budget Bill was brought forward in the House of Commons, but these expectations have, unfortunately, not been realised. A certain impression is prevailing that we seek to obtain a bounty from the Government. So far from this being the case, when we made known to the trade what were our actual demands many thought the allowance asked for insufficient to cover our loss. In a conversation I had on the subject with Dr. Bell (the chemist representing the authorities), the latter, in order to illustrate the difficulties in the way of the Government, asked me whether there would be anything to prevent a manufacturer from exhausting ginger with methylated spirit, abstracting the oil-resin, dissolving the latter in pure alcohol, and then claiming a drawback, as if the root had been exhausted directly with pure alcohol, thus making a clear profit out of the allowance. Dr. Bell thought the authorities had no actual proof of the amount of spirit lost in the process of making the various tinctures, but accepted my offer to send an inspector to my firm's works to judge for himself. For the last seven days this gentleman has come regularly in the morning, provided with his official seals and red tape, and after working himself in the laboratory in conjunction with my firm's chemist, seals up the alcohol employed on leaving, and uses every precaution to render his experiments as exact as possible. If after all these experiments our demands are not granted I am much afraid we shall never get what we ask for, viz. a fair drawback on the spirit lost in making tinctures and other preparations.

Mr. David Howard expressed his thanks to Mr. Umney for having so generously admitted the authorities to his laboratory, and agreed that if the demands of the trade were not conceded now it would be hopeless to expect anything in future. The real point at issue was undoubtedly the difficulty of ascertaining exactly the loss of alcohol in manufacturing. He mentioned tincture of cantharides as an instance of a

tincture in which the loss of spirit in manufacturing was practically nil, so that if a uniform drawback were allowed on all preparations the manufacture of such a tincture as that of cantharides would become very profitable.

The Chairman also thought that Mr. Umney's action in offering facilities to the officials deserved the best thanks of the section. A formal vote embodying this sentiment was then duly proposed, seconded, and unanimously agreed to.

THE WORKING OF THE MERCHANDISE MARKS ACT

next came up for discussion, the Chairman inquiring whether anyone present had been aggrieved by the operation of that Act. But nobody appeared to have any complaint to make in this respect, and Mr. Umney related that, so far as he was aware, the only instance in which the wholesale drug trade could be said to have been directly affected by the measure at all was with respect to a consignment of anise seed which, being marked "London," had been sent to Hull, and was there kept back for several days, the Customs refusing to pass it through on account of the mark. It was subsequently explained that the action of the Customs in this instance was probably based upon the experience acquired in the case of certain goods, with which "port-marking" was resorted to as a means of deceiving buyers about the place of manufacture. The Chairman announced that the experience of all sections of the Chamber showed that the Act worked satisfactorily, and was not in any way injurious to British trade. He thereupon proposed that Mr. David Howard be appointed to represent the chemical trades section on the Merchandise Marks Act Association, a body which exercised its influence with the Customs to prevent undue friction in the operation of the Act, and obtained legal advice when difficulties arose. This proposal, seconded by Mr. Umney, was unanimously agreed to, and Mr. David Howard expressed his satisfaction at the manner in which the Act was now put into operation, and by which much of the trouble experienced in the beginning had abated. The section then turned its attention to the question of the

LEGALISATION OF INVOICES FOR THE UNITED STATES,

a subject about the details of which a good deal of confusion seemed to prevail. The grievance which it is desired to remove apparently lies in the 641st clause of the American law governing the importation of merchandise, which provides that in case of shipments of goods to the United States the person actually exporting them shall make a declaration of their nature before the American consul for his own district, and that declarations by third parties, such as forwarding agents, or before consuls outside the district where the exporter actually resides, shall not be admissible. Quite recently some very slight relaxation has been made in this Draconian law, and now the exporter, in case of illness, or absence for other "unavoidable reasons," may obtain a power of attorney and send some one else on his behalf; but the regulation remains a vexatious one, and the shortness of the time allowed for appearing before the consul (about 1½ hours daily) does not render it any more acceptable; moreover, Brother Jonathan, when conceding power of attorney in some instances, took care to accompany this concession by an increase in the charge for the declaration. After some conversation it was decided to appoint a sub-committee, consisting of Messrs. Thomas Bennett and David Howard, to find out exactly what was wanted, and report accordingly. It was felt that diplomatic action would be the only means by which, perhaps, the grievance might be abolished.

DEATH LURKING IN THE TIN CAN.

A somewhat sensational correspondence has recently been carried on in the press about a danger to human life said to arise from the alleged adulteration with lead of the tin used in the manufacture of provision cans. Mr. John McCall, head of a London firm of provision merchants, and chairman of the preserved food trade section, therefore addressed a letter, which was read at the meeting, to his brother of the chemical trade section, asking whether he could indicate a simple chemical test by which any person, though not of scientific education, could at once distinguish a pure tin receptacle from one adulterated with lead or other metal. A discussion ensued on this missive, in the course of which Mr. Umney pointed out the importance of distinguishing

between defective and deceptive tinplates, and suggested that if tins were found to be of the latter description, i.e., consisting of iron-plate covered with an alloy of tin and lead, the simplest and easiest course would be to bring the offender to the Mansion House and prosecute him under the Merchandise Marks Act. Mr. Messel suggested that in ordering the plates care should be taken to specify that they were to be of pure tin, and after some further conversation, during which it became evident that it would be a matter of some difficulty to comply offhand with Mr. McCall's request, the letter was referred for further consideration to the analytical sub-section. The saying that in France everything ends with a song and in England with a dinner revived a decided contradiction to-day as concerns its second part.

ANIMAL MAN

was appealed to by the Secretary, who suggested that as other sections periodically met at the festive board the chemical branch might be inclined to follow that example, in which case he (the Secretary) would be glad to "make the necessary arrangements." But the idea fell flat, and was passed over without discussion, Mr. Umney saying that it had been suggested that Mr. McCall, in return for the valuable information which he would receive, might invite the chemical section to

DINE OFF THE SPURIOUS TINPLATES,

a suggestion received with much merriment.

After this interlude serious business was again resumed, the Secretary reading a letter from Mr. Thomas Christy, calling attention to the fact that hundreds of tons of damaged tea-leaves, tea-sweepings, &c., are annually brought to this country, but refused permission to pass the Customs as being unfit for human food. Mr. Christy, on behalf of British industry, had written to the Customs authorities asking whether this damaged tea might not be admitted duty free for the purpose of

CAFFEINE MANUFACTURE,

but had received the reply that the law forbade the delivery of tea upon which duty had not been paid for any purpose whatever. This, Mr. Christy thought, was a most important matter, directly affecting what might be a flourishing industry. At present, every year between 3,000 and 4,000 lbs. of caffeine were made in Germany mainly from tea-sweepings which were refused admission in this country. The Germans bought up every pound of these, and it was of no rare occurrence, tea brokers said, that 20 or 30-ton lots were thus purchased at a time. Mr. Christy suggested that if the Customs officers could be brought to admit the duty free importation of this tea under certain conditions, a new industry might be created in this country. The sweepings might be rendered perfectly unusable for consumption by being saturated with petroleum, which would not act in the least the extraction of caffeine, nor be in any way costly process, a very small quantity of petroleum only being required to permanently render tea unfit for use as a beverage. Mr. Christy had been in correspondence on the subject with Messrs. G. T. C. Bartley (M.P. for North Islington) and Sir John Lubbock, M.P., and these gentlemen had spoken to the Chancellor of the Exchequer, and were prepared to put questions on the subject in the House of Commons. The Customs officials said that there was no precedent for the proposal, but thought that the request might be brought before the authorities. It was ultimately decided that Messrs. Thomas Christy and T. P. Morson should pursue the matter and report further at the next meeting.

THE ELECTION OF OFFICE-BEARERS

closed the proceedings. Mr. Umney proposed the re-election of Mr. Thos. Tyrer as chairman, adding a few words of high appreciation of that gentleman's services not only to the section, but to British industry in general, sentiments which were cordially echoed by the seconder. Mr. Wm. Hogden was also re-elected to the vice-chairmanship, and the third of the committee, with the exception of Mr. G. H. W. Hill, who had declined to stand, were also re-elected. Mr. Hogden's place Mr. Otto Hehner was chosen, the other gentlemen being Messrs. B. Redwood, J. M. Steel, J. T. Macadam, C. A. Gosnell, A. Horny, G. Pugh, C. Christopher, W. J. Crook, J. B. Francis, Thos. Christy, Arthur B. Hill, W. J. Bush, R. A. Fairclough, and Chas. Wightman.

SOCIETY OF CHEMICAL INDUSTRY.

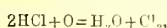
LONDON SECTION.

A MEETING was held in the Chemical Society's rooms, Burlington House, on Monday, at 8 P.M., Mr. David Horsfield in the chair. The first paper read was on

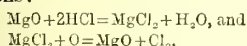
THE MANUFACTURE OF CHLORINE,

By C. T. Kingzett, F.C.S., F.I.C.

The paper had special reference to the use and economy of magnesia in the process. When Professor Dewar read his paper on the Weldon-Pechiney process before the society it appeared that the reaction involved in that process had not been satisfactorily determined. The oxychloride of magnesia was finally treated in the process contains more than 20 per cent. of water, and it is possible that the chlorine which is obtained results not merely from the action of oxygen on the dry chloride or oxychloride, but also in part and perhaps chiefly, from the oxidation of the vapour of hydrochloric acid, which is generated in the earlier stages of the decomposition. Thinking over this the author came to the conclusion that Leblanc soda-makers might utilise much of their waste hydrochloric acid in the manufacture of chlorine by simply passing it through a permanent quantity of magnesia, which would act as a catalytic agent. The whole matter was made the subject of experiment, and the author now placed some of the results before the members. For typical experiments were spoken of. In the first of these a mixture of dry air and hydrochloric acid gas was passed through a combustion-tube packed with magnesia and asbestos, the whole being at a bright-red heat maintained for an hour. Chlorine was evolved copiously, and it was found that the combustion-tube contained magnesium chloride, the result leading to the supposition that the reaction occurring is not only

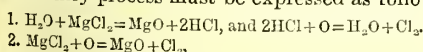


but that the chlorine, in part at least, resulted from the following reactions:—



To elucidate this matter further, a second experiment was made in which only asbestos was packed in the tube, and the evolved gas was allowed to act on a solution of potassium iodide, the experiment again being made at a bright-red heat. In this case again chlorine was copiously evolved, thus proving that at a bright-red heat air decomposes hydrochloric acid and furnishes chlorine in consequence, but that the quantity so obtained is much less than that which results when magnesia is employed as a catalytic agent.

The next experiment was made to ascertain if chlorine is obtained by the direct decomposition of anhydrous magnesium chloride by oxygen. For this purpose a mixture of recently ignited magnesia and asbestos was packed in a combustion-tube, dry hydrochloric acid gas passed through this for an hour, the current of gas then stopped, and residual gas then driven out with air, the tube allowed to cool, again heated, and a current of air passed through it. In this case also chlorine was copiously evolved, and the amount estimated from the quantity of iodine liberated from a solution of potassium iodide. The amount of magnesia employed in this experiment was 13 grms., the amount of chlorine obtained 362 grms., and the amount of magnesium chloride found in the receiver at the end of five hours 14725 grms. From the experiments the author, therefore, came to the conclusion that the chemical reactions which are concerned in the Weldon-Pechiney process must be expressed as follows:—



which the decomposition of the HCl vapour by means of air is promoted by the presence of free magnesia. The reaction is, therefore, very similar to that occurring in the Deacon process, in which chloride of copper is the catalytic agent. The fourth experiment of the series was made to determine how magnesia could best be employed for the manufacture of chlorine. In this case a combustion-tube was filled with pumice stone saturated with magnesium chloride, which on ignition was deposited in the pumice as MgO. The conditions of the experiment were much similar to the others, a

mixture of air and hydrochloric acid gas being passed through the red-hot tube for a period of six hours. The gas was obtained from 18.98 grms. of real HCl contained in the ordinary commercial acid, and of this 3.011 grms., equivalent to 2.929 grms. of chlorine, was used. The chlorine evolved was converted partly into chlorinated lime, and the residue "caught" by means of potassium iodide. The total quantity of active chlorine obtained was 1.65534 grm., and the combustion-tube contained combined chlorine. It thus seems to be tolerably well established that not only chlorine but bleaching-powder may be made directly, readily, and economically, by passing a mixture of hydrochloric acid vapour and air, with or without aqueous vapour, over any suitable substance, such as brick or pumice stone, which has been previously coated or admixed with the oxide or a salt of magnesium; and the author was of opinion that this process presents great advantages over the so-called Weldon-Pechiney process, which involves the handling of huge quantities of solid material and the employment of complicated and expensive plant.

In concluding, he called attention to the fact that the late Mr. Weldon was unaware, between 1870 and 1872, of the action of magnesia in decomposing hydrochloric acid, but that other chemists were, and he quoted from the following patents in corroboration of the statement:—

1870. Pat. No. 3093. H. Larkin and Wm. White.

1874. Pat. No. 3483. Joseph Townshend.

Neither of the processes involved in these patents was identical with the author's proposal, which may briefly be said to be the employment of any suitable porous substance impregnated with magnesia or a salt of magnesium for the purpose of assisting the decomposition of hydrochloric acid by the agency of air. The author intimated that he had taken steps to protect the novel features of the process.

Dr. LUDWIG MOND, in the course of a long speech, said that he was of opinion that Mr. Kingzett had not carried his experiments far enough, and before placing his results before the society he ought to have been able to give more than one example of quantitative results. He did not think that Mr. Kingzett's process possessed any advantages over the Deacon process, while it had most of the disadvantages of the latter; for example, it would be necessary to have pure hydrochloric acid gas, and this meant that only one-half of the gas from the salt-cake furnace could be used. Dr. Mond then proceeded to quote from a large number of patents, such as Solvay's, Hasenclever's, and his own. He contended that magnesium chloride was used before the Weldon-Pechiney patents, and predicted that ere long ammonia soda-makers will be able to manufacture chlorine as readily as the Leblanc soda-makers.

Professor DEWAR said that he would speak of the paper only with diffidence, as it contained so little proof of the applicability of the suggestion brought forward. It was perfectly well known that such reactions as Mr. Kingzett explained did occur, but what was not known was that by passing oxygen over magnesium chloride chlorine was obtained, and by reversing the process oxygen was obtained. That was what he had shown experimentally when he had read his paper. Professor Dewar then proceeded to refer to the success of the Weldon-Pechiney process, especially in regard to its suitability for making potassium chlorate, and also spoke of the great similarity between many of the patents for the manufacture of chlorine.

After some further remarks from Dr. Mond,

Mr. KINGZETT replied, saying that the criticism did not touch his point at all, which was that by the use of a small and permanent quantity of magnesia chlorine could be easily obtained. Dr. Mond had spoken of his own patents—it was natural that he should do so—and Professor Dewar had said much about the Weldon-Pechiney process, in which he had a pecuniary interest.

The CHAIRMAN, in moving a vote of thanks, said that the beauty of the Weldon-Pechiney process consisted in the engineering skill required in carrying out the theoretical proposals, and therein lay the success of most chemical achievements.

Mr. E. J. BEVAN then read a paper by himself and Mr. C. F. Cross on "The Electrolytic Bleaching Process," which was a reply to the criticism by Dr. F. Hurter of a previous paper read by them. In the present communication the electrolysis of magnesium chloride was especially considered.

Legal Reports.

SUNLIGHT SOAP + π.

IN the Queen's Bench Division of the High Court of Justice on Tuesday, Mr. Justice Manisty and a special jury tried the case of *Annat v. Platt & Co.* The action was for libel. The defendants admitted publication, but denied that the words used were libellous, or that the plaintiff had sustained any damage, and pleaded that the occasion was privileged.

The plaintiff was represented by Mr. Kemp, Q.C.; Sir Charles Russell, Q.C., and Mr. Atherley Jones appeared for the defendants.

Mr. Kemp, in the course of his opening statement, said that Mr. Kenneth Annat, the plaintiff, was the proprietor of a preparation for extracting grease spots, stains, &c., and he entered into agreement with the defendants, Messrs. James Platt & Co., wholesale woollen drapers, of St. Martin's Lane, by which they were to become agents for the sale of the article, the title of which was "Annat's Spot and Grease Extractor." From September to October goods were supplied to the defendants to the value of 14*l.* 8*s.*, and it appeared that there was likely to be a considerable sale. But in October, 1887, the defendants issued the following circular. It was headed, "Annat's Spot and Grease Extractor," and went on to say, "We introduced this to our customers in the first instance, believing it to be a most effective material at the price, and letters received since speak very favourably of it. There is no doubt of its merits to extract grease, but we have lately been informed that Sunlight Soap has the same quality. We have tested it and find it has such. We will sell the stock we have left of Annat's at 1*d.* each, and return 8*d.* to all those who have paid us 9*d.* We shall recommend, and sell in future, for the purpose of extracting grease spots Sunlight Soap at 3*d.* a cake." In consequence of this publication the plaintiff's business had (the learned counsel said) been very much injured. He would put his client in the box, who would deny that his extract was the same as Sunlight Soap, and he thought the jury would come to the conclusion that it was a case for substantial damages.

Mr. Annat, on being examined, stated that he introduced his extractor to the defendants in 1887, with the result that he entered into a verbal agreement with Mr. James Platt to supply him from time to time the quantity he required at 72*s.* a gross. The defendants were to send out circulars stating that they were wholesale agents of the article. Subsequently Mr. Platt informed him that some of his customers had stated that they had discovered the preparation to be simply Sunlight Soap, and he had determined to issue a circular, of which he showed plaintiff the first proof. Witness told Mr. Platt that it was not the case that his preparation was simply Sunlight Soap. He afterwards assured the defendant that the ingredients contained in the tablet would do the work without the soap at all, in which form it was conveyed. A few days later the defendant sent him a proof of the circular, the issue of which he advised the defendant would be detrimental to his (plaintiff's) business, and he asked him to withdraw it, and offered to take the remaining stock of his preparation off Mr. Platt's hands; but he refused, and said he must issue the circular and sell the preparation at 1*d.* Since the publication of the document his business had sunk to zero.

Cross-examined by Sir Charles Russell: I carry on the manufacture of the stuff in my own house at Hornsey, on the ground floor (front) and partially in the kitchen. I employ no hands. It was in June that I first matured the invention, and in August that I went to the defendants' manager, Mr. Blenkinsop. I have sold 25*l.* worth of the preparation.

What ingredients do you use?—I do not choose to inform the Court of that. I use Sunlight Soap for a conveyance of my ingredients, as well as other soaps too. I have no invoice of any material except Sunlight Soap. I told Mr. Platt that the merits of the production were unique, and nothing like it was known. It was a great discovery of my own; it would remove grease, paint, and ink spots from any fabric. Mr. Platt sent for me in October, and told me that his customers had represented to him that the extractor was nothing else

than Sunlight Soap. I denied that. Mr. Platt said I proposed to stop the sale of the Extractor.

Did you say you had never seen Sunlight Soap?—Yes; I did.

Then have you only begun to use Sunlight Soap in your manufacture since October?—No; I used it before.

Why did you deny all knowledge of Sunlight Soap?—Because I did not know what soap I was using.

Where did you get Sunlight Soap from?—My wife had it for household purposes. I ordered a gross of bars from Lever's, of Queen Victoria Street. I did not choose to give my name, because I thought it might lead to the discovery of my invention.

Did you say that your grease extractor was a secret preparation, not even your wife knowing how to make?—Yes; I simply used the soap as a conveyance for ingredients. I said that the ingredients were very costly and I produced a phial. I said the ingredients from which I made the fluid cost 18*s.* a pound. Upon Mr. Platt informing me that my invention was said to be Sunlight Soap and nothing else, I took steps to have an analysis made of my soap and Sunlight Soap. It was made by Mr. Napier, of Ipswich. About three weeks before the defendant sent the circular out he told me that he would not send it out in view of my protestations. Then he sent to me a second time and said he had received further complaints from his customers along with splendid testimonials.

Did he tell you that he had had your soap compared by Mr. Stevens and Dr. Attfield?—No.

Did he tell you then that he would be obliged to send out the notice to his customers, saying that he would have no more to do with the sale of your soap?—Yes; something tantamount to that. I think he charged me with having deceived him. I think he said I had made him a participant in imposing on the public.

Did he ever offer to you to give you back the stuff he had at 1*d.* a tablet?—No, sir. One of my cakes sells for 1*d.*, including postage it weighs 1 oz. A 12-oz. cake of Sunlight Soap weighs 12 oz., and is sold for 2½*d.*

Except that the piece in the box of your preparation is dry and shrivelled, is there any difference?—Yes.

What is it?—Mine contains an essential oil which the other does not.

An essential oil of what?—I decline to answer.

Do you manufacture the essential oil?—Yes; I extract it from a vegetable ingredient. I got it from a friend the first instance. It is an American plant, well known in the Homœopathic Pharmacopœia. Witness produced a bottle containing a coloured liquid.

Sir Charles Russell: It looks like hair-wash. (Laughter.)

Witness: It would make a very good hair-wash.

How many drops of this precious article would be in a cake of that soap?—Very few drops would be necessary.

Except half-a-dozen drops from that bottle, is there any distinction between your preparation and Sunlight Soap?—It is very powerful in its action for the purposes required.

And the addition of those drops creates the difference in value between 2½*d.* and 16*s.* for 12 oz.?—I have not worked it out. The first supply I got from the plant and paid nothing. For the next I paid a wholesale chemist 18*s.* a pound. I got it from a chemist contained in a liver-pad—Holman's liver-pad, which was largely advertised.

Do you mean you extracted this extract from a liver pad?—Yes. (Laughter.)

How many liver-pads did you buy altogether?—About half-a-dozen. My friend first gave it me in the crude state.

It looks like sawdust?—It is sawdust. (Laughter.)

Evidence was then called as to the practical merits of the plaintiff's preparation.

Mr. Napier, analytical chemist, of Ipswich, said that the plaintiff's production contained an essential oil that Sunlight Soap did not.

Sir Charles Russell, for the defence, said that every statement in the circular complained of was true in fact. He should prove that plaintiff's soap was the same thing as Sunlight Soap.

Mr. James Platt, the defendant, was called, and gave evidence with respect to his having received repeated complaints from his customers that Annat's Extractor was nothing more than Sunlight Soap. Upon having it tested it

was und to be the case. He offered to let the plaintiff have soap back at 1*l.* a tablet, thus losing 5*l.* on it.

Cs-examined by Mr. Kemp: I have not been indemnified in any way with respect to this action by the Sunlight Soap people.

John Attfield, F.R.S., consulting chemist, stated that he had examined the two articles and found them to be practically the same.

Our expert evidence was called of a similar character.

During the course of the trial the learned judge more than once pointed out that on the pleadings it was admitted that the tractor was the sole property of the plaintiff.

Mr. Justice Manisty having summed up, the jury retired to consider their decision, and after a short absence returned into court with a verdict for the plaintiff, damages 5*l.*

Mr. Justice Manisty entered judgment accordingly, with costs.

Sir Charles Russell asked for a stay of execution.

Mr. Justice Manisty: I see no reason for granting one. I think the verdict is quite right.

PERRY DAVIS & SONS' "PAIN KILLER" TRADE-MARK.

On Monday, April 23, the case of *re* Lancaster Harbord and Trade Marks Act, 1833, came before Lords Justices Cotton, Fry, and Lopes in the Court of Appeal.

Munce, Q.C., Mr. Millar, Q.C., and Mr. Whiteway appear for the appellants; and Mr. Phipson Beale, Q.C., and Mr. Cadwyck Healey for the respondents.

Mr. Munce, in opening, said the appeal was by Messrs. Perry Davis & Sons, druggists, of the United States of America, from decision of Mr. Justice Kay striking off the register of trade-marks, upon the application of the respondent, Mr. Lancaster Harbord, druggist, of Liverpool, the words "Pain Killer." Messrs. Perry Davis & Sons registered the words in question so far back as January, 1879, and they were then registered as an old trade-mark which had been used for forty or fifty years before the passing of the Act. The first question to be decided was whether there would be a sufficient user of the words "Pain Killer" to make them a proper subject for a trade-mark, and the second question was whether the words were incapable of being registered on the ground that they were descriptive. The respondent, who was the applicant before the court below, claimed that the words could not properly be registered, and Mr. Justice Kay struck off the words but gave Mr. Harbord no costs of the application. Mr. Harbord's case was that in the year 1836 he made up a drug which he called "Penn's Lotion."

Mr. Phipson Beale said Mr. Harbord traded under the style of Penn & Co.

Mr. Munce said it appeared from the affidavits which had been deposed that, although the words had been used by the appellants to distinguish a medicine made only by them ever since the year 1840, and the respondent was in the drug trade the respondent had never heard of it. A Mr. Baptie purchased some of "Penn's Lotion," and in writing to Messrs. Harbord to order a further quantity, asked them to send him some "Penn's Pain Killer." Thereupon Mr. Harbord thought "Penn's Pain Killer" would be a very good name to use for the medicine, and adopted it. The words were first used by the respondent somewhere about the years 1836 or 1837. Messrs. Perry Davis & Sons brought an action to restrain the respondent from using the words, and the action was stayed by a motion to strike the trade-mark off the register. He had an affidavit by Mr. Hovenden, in which he stated that he had been in business as a wholesale dealer and proprietor of medicines for thirteen years, and his firm had sold a considerable quantity of Perry Davis & Sons' "Pain Killer" every year. The preparation was almost universally ordered and asked for by customers by the name "Pain Killer" alone. He must say that the words had been claimed in Canada by the appellants as a trade-mark so far back as the year 1850. Mr. Harbord had been very reticent in giving any evidence whatever. He had read to their lordships what Mr. Hovenden had said, and he had a number of other affidavits, which he would not labour, but would simply say that he had affidavits from two wholesale dealers in Hull, one in a wholesale dealer at York, two from wholesale dealers at Liverpool, one from a wholesale dealer at Glasgow, and one from a wholesale dealer at Edinburgh, which were to a similar effect. He also had similar affidavits from Messrs.

Barclay & Co., of Farringdon Street, London, a very well-known firm, and from Messrs. Edwards & Sons, of Queen Victoria Street, who stated that the preparation was almost universally ordered and asked for by customers by the name of "Pain Killer" alone, and they had no hesitation in saying that the name "Pain Killer" was known in the English language as indicating Perry Davis & Sons' preparation. There were also affidavits from the manager of Messrs. Sutton & Co., Bow Churchyard, a very large firm; and from Mr. Newbery, of King Edward Street, a member of another large firm, who stated that the name "Pain Killer" was well known in England amongst druggists as meaning Perry Davis & Sons' preparation, and that it was the almost invariable custom of the trade to order Perry Davis & Sons' preparation under the name "Pain Killer" alone.

At this stage the Court adjourned.

On Tuesday Mr. Ince, continuing his address, said there was not a tittle of evidence adduced by the respondent to show that the words were distinctive of the manufacturer; but, on the contrary, there was overwhelming evidence that they were distinctive of the article manufactured. He asked their lordships to come to the conclusion that there had been a sufficient separate user of the mark to make the words capable of registration under the Act of 1875; and that it was special in its invention and distinctive in its application.

Mr. Millar followed on the same side. He said the trade-mark had been upon the register unquestioned by anybody for nine years, when the respondent commenced to use the words upon his preparation, which he had previously called "Penn's Lotion." The onus rested upon him to show that what had been done ought not to have been done. Up to the present he had failed to show that the mark had ever been used by anybody else.

Without calling upon counsel for the respondents,

Lord Justice Cotton, in affirming the order of Mr. Justice Kay, said that he did not mean to express any opinion whatever on the question whether the words "Pain Killer" were special and distinctive words. It must be shown that the words, before the Act of 1875, had been used as a trade-mark by themselves, and not merely in conjunction with other words, or as part only of trade mark. That was the effect of the decision in *J. B. Palmer's Trade-mark Case* (24 Ch. D. 504), which had been approved of by Lord Selborne in the subsequent case of *Leonard and Ellis's Trade-mark* (26 Ch. D. 238, 295). Upon the evidence in this case he could not come to the conclusion that these words, and these words alone, had been so used. The appeal failed, and the decision of Mr. Justice Kay must, therefore, be affirmed.

Lords Justices Fry and Lopes gave judgment to the same effect.

ANTISEPTIC COLLODION.—It has often been observed that inflammations and irritation of the skin follow the administration of hypodermic injections, and it has been found that these untoward results are due to septic inoculation. To prevent their occurrence, "antiseptic collodion," prepared by dissolving $\frac{1}{6}$ of a grain of sublimate in 3 drachms of collodion has been recommended. Before injection, the proposed site is painted with the preparation to the size of a shilling piece.

The wound in the German Emperor's throat is regularly dressed with eucalyptol. While he was at San Remo the Emperor had the prescriptions of his German medical attendants dispensed by the German pharmacist Wiedemann, while Sir Morell Mackenzie's prescriptions were dispensed by Mr. Squire, the English chemist at San Remo. In addition to surgical dressings and inhalers, the articles supplied were carbolic and boracic acid lotions, morphine and chloral draughts, stomachic powders of bismuth subnitrate, and the indispensable eucalyptol.

AN American gentleman, who does not know that saccharin forms a soluble salt with soda, has discovered that 1 drachm of saccharin dissolves in a pound of glycerine when heated, and that the result is a mixture which very closely resembles in taste and appearance the best white honey. It dissolves readily in water, milk, tea and coffee, wines and liquors. Two teaspoonfuls added to the juice of one lemon, made up to 8 fluid ounces, makes a lemonade sweet enough for almost any one, and three teaspoonfuls to 4 ounces of stewed cranberries makes a dish "fit for a king."

Gazette.

PARTNERSHIP DISSOLVED.

Thomas & Humphreys, Llanfair and elsewhere, physicians and surgeons.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Bayley, Arthur H., late of Stonefield Street, Islington, present residence unknown, medical labeller, or writer of embossed letters upon medicine bottles.

Dixon, Cecil Bernardino, and Dixon, Sara (trading as Dixon & Cardus), Northam, Southampton, oil-cake and artificial manure manufacturers.

Hodgson, William Bacon, Manor Park, Essex, physician and surgeon. Howarth, Robert Scowcroft, Chetnam, Manchester, chemical manufacturers' manager.

Joures, Robert, South Shields, chemist.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Dobson, George, Leicester, chemist—April 27, 28 Friar Lane, Leicester; May 16, Castle, Leicester.

Joures, Robert, South Shields, chemist—May 3, Official Receiver's office, Newcastle-on-Tyne; May 3, County Court, Newcastle-on-Tyne.

Key, David Thomas, Edith Villas, West Kensington, surgeon—May 2, 33 Carey Street, Lincoln's Inn; May 17, 34 Lincoln's Inn Fields.

Milner, Edward, Micheldever, Hampshire, and New Cavendish Street, London, surgeon—May 8, Chamber of Commerce, 145 Cheapside; May 9, Castle, Winchester.

Scott, William, Huddersfield, doctor of medicine—April 27, Messrs. Haigh & Sons, New Street, Huddersfield; May 14, County Court, Huddersfield.

ADJUDICATIONS.

Joures, Robert, South Shields, chemist.

Scott, William, Huddersfield, doctor of medicine.

NOTICES OF DIVIDENDS.

Briscoe, Henry John (trading as Briscoe, Son & Co.), Litherland, Lancashire, and Liverpool, general merchant and produce broker—first and final div. of 1s. 5½d., April 27, Official Receiver's offices, Liverpool.

Deacon, Henry Pelham, Willesden Lane, Willesden, lately in partnership with C. C. Dickson, surgeon—first and final div. of 3½d., any day except Saturday, Chief Official Receiver's offices, 33 Carey Street, Lincoln's Inn.

Hancock, Henry Joseph, East India Dock Road and Preston's Road, Poplar, veterinary surgeon—first and final div. of 5s. 11d., any day except Saturday, Chief Official Receiver's offices, 33 Carey Street, Lincoln's Inn.

Kelsey, William, Chalford Hill, Bisley, Gloucestershire, L.R.C.P. and L.R.C.S.—first and final div. of 11½d., any day, Official Receiver's offices, Gloucester.

ORDERS MADE ON APPLICATIONS FOR DISCHARGE.

Leon, Marcus (trading as Marcus Leon & Co.), Grosvenor Road and Claverton Street, Pimlico, chemical manufacturer—discharge granted subject to certain conditions.

Ralph, Philip, Hereford, chemist and druggist and farmer—discharge suspended for six months.

FAILURES AND BANKRUPTCY REPORTS.

Re DAVID POWELL, St. Thomas, Chemist and Druggist.

This bankrupt has been further examined at the Swansea Bankruptcy Court, before Mr. Oliver Williams, deputy-registrar. The statement of affairs shows gross liabilities amounting to 1117. 5s., out of which 1057. 0s. 6d. was expected to rank. The deficiency account showed 507. 18s. 11d. to the bad. The deputy-registrar expressed himself thoroughly satisfied with the answers given by the bankrupt, and adjourned the examination for a month, when it will be closed.

Re JACOB HUGH PAYNE, Thrapston, Chemist and druggist, and Sauce Manufacturer.

THIS debtor came up for his public examination at Northampton Bankruptcy Court last week, before Dr. Faulkner, registrar, and in answer to the Official Receiver said he borrowed 1207. from his wife in 1884 to carry on his business. He had failed previously, and had also made a composition with his creditors. His wife's claim did not rank yet for dividend. His stock had depreciated in value in the course of realisation. His provisional patent for a certain sauce lapsed in February. He placed a high value on himself, but had been disappointed. The examination was adjourned until May 8.

Re G. M. DELFECH, 21 Mincing Lane, Colonial Broker.

THE debtor, trading as a colonial merchant and broker, at 21 Mincing Lane, and Havre, under the style of G. Delpech & Co., has filed his petition, and upon the appointment of Messrs. Stocken & Jupp, a receiving order was made by Mr. Registrar Hazlitt. In reply to questions, the debtor stated that the rent of his office in Mincing Lane was 127. a year, and there was a quarter in arrear. His unsecured liabilities were about 12,0007., and there were also secured at contingent liabilities amounting to about 15,0007. His debts comprised book debts (good and bad) to the amount 19,0007. and furniture at his residence at Greenhithe about 1007.

MARRIAGES.

[Notices of Marriages and Deaths are inserted here if sent with proper authentication.]

BEMAN—HORNER.—On March 26, at Bethel Chapel, Sunderland, by the Rev. W. H. Harwood, assisted by the Rev. F. R. Roberts, J. H. Buckley Beman, wholesale druggist, Leeds, to Elizabeth Mary, eldest daughter of Councilor Henry Horner, Sunderland.

FINDLATER—KELMAN.—At Aberdeen, by special licence, on April 11, William G. Findlater, chemist, to Rosa Cameron, youngest daughter of James Kelman, Auchinchie, Banffshire.

DEATHS.

BROWN.—On March 28, Mr. William Henry Brown, chemist and druggist, Union Street, Ryde, I.W. Aged 38.

CORBETT.—On April 17, Mr. Harcourt Edmund Corbett, chemist and druggist, Kingswood Hill, near Bristol Aged 40.

EDGE.—On March 25, Mr. Robert Edge, chemist and druggist, Aintree, Liverpool. Aged 44.

ERBA.—On April 8, Mr. Carlo Erba, head of the firm of manufacturers of pharmaceutical preparations of the same name, died at Milan. Aged 77. Mr. Erba, who commenced life in very poor circumstances, at the time of his death controlled what is probably the largest establishment of pharmaceutical specialities in Italy. The deceased some time ago gave a munificent donation for the advancement of pharmaceutical studies in Italy, and is said to have left behind a fortune of fourteen millions lire (=560,0007.) of which twelve millions are left to the deceased's only daughter, and the remainder to various legatees.

JONES.—On April 14, Mr. Frank Jones, chemist and druggist, 83 Oxford Street, Liverpool. Aged 42. The deceased had been dispenser at the Cancer Hospital for some time.

KENNEDY.—On April 7, Mr. William Kennedy, pharmaceutical chemist, Trongate, Glasgow.

MARTYN.—On April 8, Mr. Edwin Row Martyn, chemist and druggist, Frankfort Street, Plymouth. Aged 74.

SCAIFE.—On March 30, Mr. Christopher Thomas Scaife, chemist and druggist, Bridge Street, Worksop. Aged 42.

WRIGHT.—On April 11, Mrs. Ann Wright, chemist and druggist, Olney, Bucks. Aged 64.

Trade Notes.

WOOD WOOL, hitherto a Norwegian product, is now made in this country by the Hartlepool Wood Wool Company.

MR. THOMAS BIGG, of Leicester House, Great Dover Street, Borough, London, has just issued a useful pamphlet on sheep and lamb dipping, with special reference to his composition.

A BILL has been introduced in the Parliament of Quebec to consolidate and amend the law respecting fraudulent marks on merchandise. The provisions of the Act are similar to the Merchandise Marks Act of the United Kingdom, and is the same as the Bills which are to be adopted in all British colonies, in consequence of representations made by the Prime Minister.

MESSRS. PRESSWELL BROTHERS, sponge merchants, 2 Red Lion Square, have just added considerably to the commodiousness of their premises by taking a lease of the house No. 1 Red Lion Square, an old town residence of Miss Florence Nightingale. The new premises consist of a house of four floors, resembling No. 1 so closely as to appear uniform with it. The firm have made the alterations necessary to make the two houses into one, and will now be in a better position than ever for storing goods and for doing business with dispatch.

TABLOID TRITURATES.—The latest form of elegant pharmacy from the laboratories of Messrs. Burroughs, Wellcome & Co. is the tabloid triturate. This form for administering medicines they have already made familiar in the strophantid, tabloids, and now extend it to a long list of remedies, most of which are of a potent or nauseous character. For some time Drs. Lauder Brunton, Murrell, and others have paid attention to "triturations" of drugs as means of administering these in a well-divided state. Triturations, according to the United States Pharmacopoeia, are mixtures of 10 parts of the medicine with 90 parts of sugar of milk. It is upon this basis that Messrs. Burroughs, Wellcome & Co. have worked, adapting, however, the proportion of the diluent to each case, and then apporportioning the trituration into tabloids, so that the triturations are a typical example of exact medication. The tabloids are between 1 and 2 grains in weight, and are put up in fifties and hundreds in the vinaigrette bottles which the firm have done much to make popular.

NEW COMPANIES.

HOBBS' PATENT AUTOMATIC INFUSER COMPANY (LIMITED).—Capital, 5,000*l.*, in 1*l.* shares. Object, to purchase from Mr. James Hobbs, of 13 Springfield Road, Brighton, an improved apparatus (Patent No. 6,672, 1885) for making infusions in small quantities, intended more especially for tea, together with the stock, &c., connected therewith.

NORMAL FOOD COMPANY (LIMITED).—Capital, 250,000*l.*, in 5*l.* shares. Object, to acquire the business, &c., of the Highland Fisheries Company (Limited), and the Normal Company (Limited), and to carry on the business of sea merchants, fish dealers, fish carriers, curers, and manufacturers of and dealers in fish, fish extracts, soups, cakes, oil, glue, manure, guano, and other products of fish, derived from fish, and the waste products of fish.

NATIONAL PURE DRINKING-WATER AUTOMATIC SUPPLY ASSOCIATION (LIM.).—Capital, 100,000*l.*, in 1*l.* shares. Object, to manufacture and deal in automatic machines for the supply of pure water or other liquids, and to acquire certain letters patent for the manufacture of the said machines.

TAYLOR DRUG COMPANY.—Capital, 20,000*l.*, in 1*l.* shares. Object, to acquire the business of patent-medicine vendor, druggist, and general storekeeper, at present carried on by Mr. William Barker Mason at 3 Albion Street, Leeds; 3 Bear Lane, Leeds; 14 and 15 Thornton Arcade, Leeds; 60 Kirkgate, Bradford; 372 Manchester Road, Bradford;

Market Place, Pudsey; and 24 Westgate, Dewsbury. The first subscribers are the said Wm. B. Mason, wholesale druggist, Lifton House, Leeds; W. J. D. Bratt, pharmaceutical chemist, 61 Ackhurst Street, Bradford; H. B. Thompson, warehouseman, 159 Roundhay Road, Leeds; T. G. Milburn, accountant, 58 Woodsley Row, Leeds; J. Pickering, registered chemist, 5 Burton Slow Lane, York; J. G. Hopps, registered chemist, 7 Fountayne Street, York; and J. Cookson, chemist, 2 Providence Row, Clay Pit Lane, Leeds. The business of the company shall be carried on by Mr. Mason, who shall be managing director, and he may also hold the office of secretary, and shall not be removable.

SIR ANDREW CLARK is reported to have once made the remark, "I worked twelve years for bread, twelve years for butter, and twelve more for the luxuries of life."

A POMADE FOR SCURF.—A case of apparent chronic sulphur poisoning from the use of the following pomade is reported:—

Vaseline ..	..	..	..	..	100 parts
Wax ..	..	..	..	..	5 "
Sulphur ..	..	..	..	..	10 "
Oil of roses ..	..	..	..	..	a few drops

The patient had used this for some time to cure dandruff of the scalp, applying it every second day. The physicians who attended the patient say that the poisoning was directly caused by the oxidation of the sulphur and its mingling with the perspiration, forming sulphurous acid, which was absorbed. The cessation of the use of the pomade was followed by speedy restoration to health.

POISONING CASES.—An inquest was held at Dudley, on Monday, on the body of David Williams (17), a pupil-teacher. It appeared from the evidence that deceased had lately been studying very hard, and this apparently had affected his head. On Saturday morning he was found by his father in an unconscious state, and a letter written by him showed that he had contemplated suicide. Mr. George White, chemist, said Albert Sheldon and deceased called on Friday night, and the former asked for something to kill a dog. An ounce of prussic acid was supplied. Williams witnessed the sale and Sheldon paid for the poison. Sheldon corroborated this, and Dr. Higgs proved that death was due to prussic acid. A verdict of "Suicide whilst in a state of temporary insanity" was returned.—Margaret Jane Carson (18), lately a nurse at 29 Cranworth Street, Ardwick Green, Manchester, was dismissed from her situation last week, and was so affected on this account that she immediately went to the shop of Mr. James Meacham, chemist, 287 Hyde Road, and asked for a packet of poison to kill rats. She was supplied with a threepenny packet of "Battle's vermin-killer." She returned in the course of three-quarters of an hour, and, alleging that she had lost the powder, asked for another packet. Before it could be given she fell to the floor, evidently in a fit. Assistance was obtained, and the young woman was at once conveyed to the Infirmary, where she died. She had swallowed the vermin-killer. The facts were elicited at an inquest held on April 25.—At Sheffield, on Tuesday, Leonard Hill, a shoemaker, attempted to commit suicide with threepennyworth of chlorodyne and some Battle's vermin-killer, and after suffering three hours' pain he regretted the act and called in medical assistance to aid in his recovery.—On the same day, at Denton, an inquest was held on the body of George Darling (25), who died somewhat suddenly at his father's residence, on Monday morning, from the effects of an overdose of a sleeping draught.—Vermin-killer has been unusually run on by suicides lately. At Birmingham, on Wednesday, an inquest was held on the body of Jessie Huxley, who had swallowed a packet of vermin-killer containing 8 grains of strychnine.—Sensational reports have been published during the week of an enormous poisoning crime said to have been committed in Brazil by a Senhor Joaquin Bueno, who is said to have used strychnine and chlorate (? chloride) of mercury to poison the wells, the wine, and the provisions belonging to some Indian villages, and to have succeeded in his villany to the extent of securing nearly 4,000 corpses. The story has been officially and definitely contradicted by the Brazilian Minister, but whether it is a pure invention or only an exaggeration of some actual circumstances remains to be ascertained.

TRADE "SANITAS" MARK.

DISINFECTANTS(FLUIDS, POWDER, SOAPS),
NON-POISONOUS, PLEASANT, AND BEST.Used by more than 1,000 Boards of Health and Hospitals.
Gold Medals, Calcutta 1883-84, Paris 1885, Antwerp 1886.THE "SANITAS" COMPANY, LIMITED,
Letchford's Buildings, Bethnal Green, London.

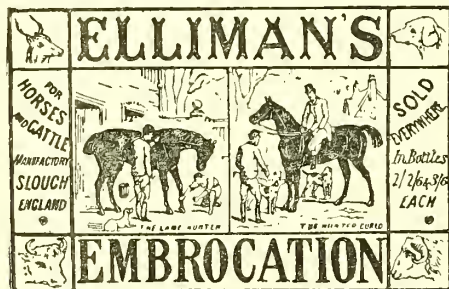
'SECURUS JUDICATOR BISTERRARUM'

Apollinaris

"THE QUEEN OF TABLE WATERS."

The filling at the Apollinaris Spring during
the year 1887 amounted to**11,894,000 Bottles.**

SHOW CARDS, 24×17 or 17×12,



Free to any Address.

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CATALOGUES & PRICE LISTS ILLUSTRATED
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See Advertisement, page 14 (bottom folio).

MADE IN LONDON 1873 **MUMFORD'S** PARIS 1875
PURE CRUSHED LINSEED

17/- per cwt., bag included, 18/- in 28 and 56 lb., 20/- in 7 and 14 lb. parcels
 1 lb. tins, 5/- per doz. Best Quality. No Oil Extracted. Carefully
 Cleaned and Ground, so as to retain the natural colour of the seed without being
 heated. G. S. MUMFORD FARRINGTON ROAD, LONDON.

Woodhall Spa.**STRONGEST BROMO-IODINE MINERAL WATER**Especially recommended by the Medical Profession
For RHEUMATISM, GOUT, and SCIATICA, Chronic
Skin Diseases, Scrofula, Rickets, and some Diseases peculiar
to Women.The Woodhall Bromo-Iodine Water is now being bottled at the spring
and can be obtained from any Chemist, or on application direct to the
Spa, Woodhall, Lincoln.Note.—The **NEW BATHS and PUMP ROOM**
are now open to the Public.**Woodhall Spa.****DR. RICHTER'S PAIN EXPELLER**

1/1½ and 2/9, is regularly stocked by the Wholesale House

USUAL TRADE TERMS.

DEPOT FOR THE UNITED KINGDOM:

DR. RICHTER & CO., 1 Railway Place, Fenchurch St., London E.C.

*Do you make your Tinctures and
 Infusions with Fletcher's New
Dignors? If not, send to the
 Manufacturers for a Trial Sample.*

EDITORIAL NOTES.**LEGISLATORS ON PHARMACY**

THE letter printed at the head of our correspondence section
this week shows that the opposition to the branch shop
clause, raised on the part of certain unqualified managers, in
what we have more than once testified to have been a reason-
able and temperate manner, has been effective. The pro-
moters of the Bill in the House of Commons have consented
to amend the clause in committee in such a way as to exempt
existing managers of a certain status. This information is
quite authoritative and reliable. And there is reason to be-
lieve that if the Bill were to have a chance of passing, such a
course as that agreed to by Sir Henry Roscoe and Dr. Arch-
barron was the only one to be taken. Our Nottingham re-
port contains three letters from Members of Parliament, all
indicating a strong reluctance to assist by legislation any-
thing approaching restriction of industry. We are doubtful
of the possibility of framing a clause which shall exempt
exempt those managers who may be thought to have some-
thing like a claim to such exemption, but if it can be done,
it will make a desirable reform possible without occasioning
too much hardship. Our information leads us to believe that
the support of the Pharmaceutical Council to this amend-
ment may be looked for, and as it will remove the most
serious opposition to the Bill, it leaves a fairly clear path
for its passage.

The Council of the Pharmaceutical Society of Ireland ap-
pear to be preparing their Parliamentary campaign with a
certain degree of deliberation, and we presume they have
given up any anticipation of getting their Bill passed this
year. At the best, they will be able to do no more than.

near a demonstration in the House of Lords this year, for under the most favourable conditions the hot weather will certainly reach the House of Commons before the Irish Pharmacy Bill, and there is absolutely no chance for an opposed Bill which is read a first time when the temperature is near 80°. The recent discussion in the Irish Council reveals the interesting fact that Lord Milltown does really consider the bills which he introduces. We are afraid that in spite of our previous comments we have done him an injustice in this respect. It is also satisfactory to find, from his comments, that the noble Lord is ready to give fair consideration and due weight to criticism from outside quarters. His views in regard to "chemists and druggists" in Ireland have reflected very nearly the position we have persistently taken, and he is certain, sooner or later, to support in full the only reasonable and permanent solution of the difficulty, which will be to create or restore arrangements providing for the establishment of two classes of pharmacists in Ireland.

Lord Milltown indicates that he will not support any plan for legalising the status of "chemists and druggists" in Ireland except by a modified examination, and the Council agree to provide such an examination. This, it seems to us, is not ordinary justice. The men who in Ireland have established themselves as "chemists and druggists" since 1819, if they have not broken the law, have certainly not been squeamishly respectful to it; and it is hardly right that they should be rewarded, while more scrupulous men should find themselves in a worse position. But then these unrecognised chemists and druggists have supplied an undoubted need, and that need will continue to exist. The Bill is not worth passing merely to get the Pharmaceutical Society out of a temporary difficulty. What Lord Milltown needs to do is to see that provision shall be made for a sterling moderate examination, which shall ensure to all parts of Ireland a sufficient supply of traders who can be trusted to carry on the necessary transactions in poisons.

The attempt on the part of the Irish Council to introduce a measure directed against the stores Lord Milltown flatly refuses to have anything to do with. He makes its excision a condition precedent to his undertaking charge of the Bill. We are not surprised at this resolution, though we regret it, but we commend it to the consideration of those who also valiantly urge the addition to the English Pharmacy Bill of simple and sweeping clauses drawn up for the express benefit of a class, and not of the public generally.

THE PHYSICIAN ABSORBS THE PHARMACIST.

A pitiful picture which Mr. Kinninmont drew in Edinburgh a fortnight ago of the prospects of Scottish Pharmacy, in the event of the Pharmacy Acts Amendment Bill becoming law, was a somewhat staggering prospective climax to the hopes of those who believe that a pharmaceutical curriculum will be the saving of the drug trade. "The Bill," he said, "is simply meant for Glasgow and all like cities a great depression in legitimate trade. It would make the trade too expensive for the remuneration that was to be had in pharmacy. The result would be that the medical men would be everywhere and the chemist nowhere—in fact, the latter would have no *locus standi*. In Glasgow there were three medical men for one chemist, and by-and-by there might be six in fact, their profession was being squeezed out, owing to the competition of medical men and the competition of stores." Glasgow is undoubtedly peculiarly situated, and, as it is rightly claims to be the second city in the kingdom, its position as regards pharmacy is worthy the attention of

pharmaceutical legislators. When the British Pharmaceutical Conference was held in Glasgow in 1876, English visitors had their eyes opened as to the everywhere-presentness of the "doctor's shop." A dozen years have only helped to increase the number, and meanwhile the city chemists have been shorn of their profits by the advent of the cutting stores. It is in the knowledge of these facts that Mr. Kinninmont has sounded his note of warning, and that Glasgow chemists have resolved to strenuously oppose the Pharmacy Bill.

The point raised by Mr. Kinninmont in regard to the relative cost of the medical and pharmaceutical curricula is one which deserves to be taken into account. It is obviously a matter of the highest importance to the community to know that a youth may be educated for the medical profession at but a slightly greater cost than will be required for a minor branch of that profession. Is this really the case, however? Mr. Kinninmont gives little information on the point, but it is well known that Glasgow is very favourably situated as regards medical education. The university degrees of M.B. and C.M. can be obtained for a minimum charge of 90*l.*, Aberdeen only of all the other universities in Great Britain beating this figure. Then there exists in Glasgow an admirable institution—Anderson's College—which imparts sound medical education, sufficient for the double qualification of the Scottish colleges, at a cost of 48*l.*, or just double the sum that will be required for the courses of lectures and teaching in chemistry, botany, and materia medica which are contemplated by the Pharmacy Bill. But lecture fees do not comprise the total cost of education; a much more serious matter is the time which must be devoted to study, and the present regulations of the medical qualification require that a period of not less than forty-five months be spent at a medical school, whereas the pharmacy curriculum will cover a period of ten months only. The expenses of maintenance must therefore be much higher in the one case than in the other; and there have to be added to the higher expenses the greater outlay for books, anatomical and other subjects, and higher examination fees, the whole constituting a powerful deterrent against entrance to the medical profession by those who swell the ranks of pharmacy in the West of Scotland. We fail to see, therefore, that there is any strong reason on the ground of cost for supposing that pharmacy will be deserted in favour of medicine. There must be stronger reasons for the desertion, and these reasons probably lie in the demand for cheap doctoring and physicking which exists in populous manufacturing towns. Glasgow has a peculiar population of this kind, made up largely of Irish immigrants and their descendants, who have come to this country in blessed ignorance of doctor's fees and a strong belief in the union and dispensary systems. Consequently, doctors' shops bulk largely in the pharmacy of the city. But there is another reason for the number of doctors' shops, viz., that doctors do not dispense their own medicines, but arrange with chemists to have a consulting room in their shops, where they may see patients, and in return for this the chemists get the dispensing to do. In many cases the doctor becomes jealous of the chemist's success, and opens a shop for himself. The chemists are not altogether blameless for this condition of things; it is peculiarly a west of Scotland custom, and has failed to get a foothold in other important towns in Scotland. The custom has greatly helped to foster the absorption of the pharmacist by the physician, by tempting the doctor to become a chemist and the chemist to become a doctor. It is quite opposed to the spirit of the age, distribution of labour being the tendency of the times; and we have a hope that the English dispensary system, which is a

somewhat parallel case, will ere long give place to more thorough methods of medical treatment. The dispensary is not, however, an open 'drug shop, and does not encroach upon the domain covered by the Pharmacy Acts; doctors' shops do, and it is a matter for consideration whether they ought not to be subject to the same regulations as the shops of chemists and druggists. So long as they are *bonâ fide* conducted by the owners themselves, no harm can result; but when the managers are girls and unqualified youths—as many in Glasgow doctors' shops are—it is obvious that an element of danger is introduced which is contrary to the spirit of the Pharmacy Acts.

THE HEALTH OF LONDON.

IN a short note published last week we quoted a few figures from the report of the Registrar-General for 1887, showing the apparently steady progress of the metropolis towards sanitary perfection. We showed that since 1840 the London death-rate had diminished from 25 to 19·6 per thousand. If the improvement has been fairly spread over persons of all ages, and proves to be an established one, it may be read in the reverse way as meaning that a Londoner has now a chance of life twenty per cent. better than his father had, and this notwithstanding the vast increase and greater density of population. Registration London is comprised in 77,410 acres, or 121 square miles. The space has not increased, but the population living in that area has nearly doubled. So that, while in 1841 there were 25 persons living on each acre, in 1881 there were 49 persons in the same space. But it may be fairly argued that a much larger proportion of the workers in London proper go out of its limits every evening, and that these, though they may contract disease within its boundaries, go away to die. To see how that consideration would reduce the comparative healthiness of London, we refer to the Registrar's tables applying to what he calls Greater London. His limited London is a space enclosed within a rough sort of square extending about 11 miles in each direction, and containing a population estimated in the middle of 1887 to have numbered 4,215,192. The "outer ring"—which includes Barnet on the north, Leyton and West Ham on the east, Croydon and Epsom on the south, Brentford and Uxbridge on the west—has a total population of 1,200,374. The death-rate of the inner and more densely populated city is, as we have said, 19·6; that of its outlying suburbs, to which it may be thought many of its inhabitants go to die, is only 15·9, a better figure than the 16·88, which is the death-rate of Brighton, the apparently healthiest of all the large towns in England and Wales. Taking London with its outer ring, the mean death-rate for the whole is reduced to 18·9, which is very near that of all England and Wales taken together, where it is 18·78.

Comparing London with the rest of the country, we find it is only surpassed in the lowness of its death-rate by eight of the 28 towns specially reported on by the Registrar. These are generally the smaller of the 28, namely, Brighton, Derby, Norwich, Nottingham, Hull, Portsmouth, Leicester, and Sunderland. Birmingham is almost on a level with London. The great manufacturing towns of Lancashire and Yorkshire are all much worse. Where 1,000 people would die in England and Wales generally, the same population in Brighton would give 925 deaths, in London 1,106, in Birmingham 1,120, in Leeds 1,199, in Liverpool 1,384, and in Manchester 1,701.

London compares favourably, too, with foreign capitals. In Paris the death-rate is 23·4, in Brussels 20·9, in Amsterdam 22·1, in St. Petersburg 27·8, in Berlin 21·9, in Vienna 25·9, in Rome 28·8, in New York 26·4, and in Philadelphia 21·9.

Sanitarians and medical men are fairly entitled to great deal of credit in bringing about the satisfactory condition which these statistics manifest, and it seems to us that the much-abused Metropolitan Board and City Corporation deserve some respect for their courage in dealing boldly, if perhaps sometimes extravagantly and mistakenly, with such difficult matters as drainage, unfit houses, disinfection, &c. The diminution of disease and death is attributable mainly to improvements in these respects. Medical skill would seem to be a much inferior factor. During the past year, however, diseases of the circulatory system, and diseases of the urinary system each secured a greater proportion of victims, and it is noticeable that this increase has been a common one during the past four years. Deaths due to premature birth are similarly steadily on the increase. The improvement in recent years is most marked in fevers, tubercular diseases, and diseases of the respiratory system. With regard to fevers, the statistics are somewhat surprising. It will be remembered how alarming were the daily reports in the papers during the latter half of last year in regard to the spread of scarlet fever. It now appears that the total number of deaths during the year from that disease was 1,447, being a rate of 0·34. The number of deaths was somewhat in excess of that of either of the two immediately preceding years, but was considerably below the annual average of the previous ten years, which was 1,965, or a rate of 0·47 per thousand. Measles in 1887 claimed exactly twice as many victims in London (2,894) as scarlet fever, and whooping-cough was even more fatal, its record being 2,948. Measles and diphtheria are the only zymotic diseases which seem to be on the increase. Small-pox, which from 1770 to 1886 averaged in London annually 1,141 deaths, occasioned only 9 deaths in 1887. The same number is attributed in the year to "cow-pox and vaccination." Hydrophobia is credited with 2 deaths in 1887, the annual average being set down as 10. It is curious to observe that while the general improvement is progressing, "old age" is also reduced as a cause of death from 2,801 (average) to 2,458 (in 1887). London deaths from accidental poisoning in 1887 were 64, the average of the previous ten years having been 75 from suicide by poisoning, the number was 71 against the annual average. The mean temperature of the air at Greenwich during the year was 47·8°, or 0·8° below the average of the previous 115 years, though in the summer it was 1·3° above the average.

PULQUE: ITS SOURCE AND MANUFACTURE.

THE question recently asked in the House of Commons by Dr. Cameron, of the Secretary to the Treasury, regarding the decision of the Commissioners of Inland Revenue to refuse a licence on an importer of Mexican pulque in Edinburgh, has raised some interest as to the origin and nature of the spirit in question. The following notes on the subject may therefore be of interest.

Pulque is the national drink of the Mexican people and is obtained from the American aloe (*Agave americana*), a plant which is much cultivated in greenhouses in this country. It is known in Mexico as the "maguey," or "tree of wonders," and is considered, in its numerous varieties, as one of the most important productions of the Mexican soil.

The best account of the *Agave americana* and its uses was given in a report by Her Majesty's Secretary of Legation on the commerce of Mexico in 1865, from which the following notes are taken. Pulque, it seems, was well known to the ancient inhabitants of the Mexican continent, from the fabulous traditions connected with it, and which were col-

by the missionaries who came to the country in the early days of the Spanish occupation. One of these is the story of a race of giants indigenous to the valleys of Atlix and Matlacueque, and of cruel propensities, by more civilized races who had come to settle there, the former having fallen asleep from the somniferous effects of the juice of maguey, whilst the discovery of the juice itself, whether under its ancient denomination of "metl," "agua-miel" (honey-water), or "pulque," was attributed, by a portion of the ancient inhabitants of Mexico, to the god Izquicatl, as would appear from various symbolical inscriptions found in the country. More modern tradition, however, has fixed the epoch of its discovery to about the years 1040 to 1050, under the reign of the eighth king of the Tlali tribe, named Tepaucaltzin, at whose court a relation of his named Pepautzin presented himself and informed him that his daughter had discovered that a sweet and aromatic liquor sprang from the metl plants in her garden. The king ordered her into his presence, and she brought him a "metl," or vase, of the liquid she had discovered, which he tasted and then ordered her to bring him more, and subsequently becoming enamoured of the maiden—whose beauty was great, and whose name was Xochil, or flower—he married her, which union a child was born, to whom was given the name of Meconetzin, or "Son of the Metl," or maguey, in allusion to the circumstance which was the origin of his parents' first interview.

Whether the discovery of the use of the juice of the maguey is really to be attributed to the god Izquicatl, or to the Queen Xochil, there is no doubt that the various properties of the plant itself were known many years before the discovery of Mexico by the Spaniards, for, not only is it mentioned as furnishing thorny scourges, as well as whips, made of the fibres of the plant's leaves for the multitudes who annually met to celebrate a festival in honour of the god Xcatlipuca in the great temple of Tenochtitlan (the modern Mexico); but the use of the juice became so general that many severe laws against the drunkenness resulting from it were issued by the ancient Mexican kings, mentioning the case of a widow, who sold it promiscuously, having been put to death by the order of the King Netzahualcoatl, only women suckling infants, old people, and soldiers upon the march being allowed to drink it.

Notwithstanding that the primary object of the Spaniards when they came to Mexico in the earlier periods of its subjection was to search for the precious metals, the maguey plant also occupied their attention very considerably, especially when increased intercourse with the natives revealed the various uses to which the plant was put by them, and was fully treated of by the authors of the time. The plant may be cultivated at an elevation of 10,000 feet above the level of the sea, but is grown with greater success at an elevation of about 9,000 feet. Though the plant is grown in many parts of Mexico, the great maguey district is that of the plains of Apam, embracing a range of territory of more than 300 square leagues, almost covered with the plant, either in its wild or cultivated state. This vast maguey district is now entirely destitute of trees, although vestiges remain of cedar forests which formerly existed there, the soil being light, stony, and apparently arid in many places—indeed, nothing can be less agreeable to the eye or promising in a general aspect than these or any other maguey plantations, although so surprisingly productive. In the district referred to there are maguey-growers whose estates are not worth less than some millions of dollars, taking into account the quantity of pulque produced.

As far as can be ascertained from the meagre statistical records of the time, not more than from 50 to 60 pulque

estates existed during the last two centuries, whilst, in the several districts of the Mexican table-land of Teotihuacan, Pachuca, Apam, and Texcoco, there are now 178, and from 80 to 100 in the district of Ilaxcala.

The following is the mode adopted for the extraction of the juice of the plant, and the manufacturing from it of pulque. So soon as the leaves begin to turn yellow, a small concave aperture is scooped out, by means of a keen-edged knife called an "izteti," in the core of the plant, which is usually from 18 to 20 centimetres in diameter, and this aperture is gently scraped round, care being taken that no incision be made in the leaves or fibres around it, for fear of imparting a bad taste to the juice. This operation produces a sediment denominated "raspa," through which the juice, generally known under the technical name of "agua-miel," or honey-water, exudes from the grooves of the plant; this juice is extracted by the "ilachiquero," or maguey labourer, by means of an elongated gourd formed into a tube, called an "acocotl," the air in which is exhausted by suction, and which he thrusts into the incision in the core of the plant, stopping the aperture at one end with his finger, and emptying its contents into his "zurron," a sort of impervious sheepskin bag inserted in a net and strapped to his back. Each labourer has usually the care of from 50 to 60 plants, from which he extracts, or, as it is technically expressed, sucks from about 110 to 120 arrobas of honey-water per week. As soon as his zurron is full, he carries it to the "tinical," or pulque manufactory, very commonly returning to each plant, and performing the same operation of scooping round the incision and exhausting the juice it contains, twice in the day, taking particular care to cover up the aperture with leaves and stones, lest the cattle, dogs, or cagates—a small species of jackal, which infests the country in large numbers—should get at the juice.

The honey-water varies in quantity, colour, and quality, according to the variety of the plant, the producing time of which may be said to extend on an average to about three months, although some sorts only yield juice during a period of twenty days, and other sorts are so plentiful that they yield it during six months, and that in large quantities. The least productive variety of the plant is calculated to yield about 60 arrobas of juice, that of an average sort about 80 arrobas, while the finest sort of all, the "manso legitimo" of the plains of Apam, yields, when it has attained complete maturity, from 140 to 160 arrobas. The average quantity yielded by each plant, one with another, may be roughly estimated at about 100 arrobas.

The "tinicales," or pulque manufactories, of the different maguey plantations, consist of a long covered-in gallery, well ventilated, and containing rows of vats made of bullock's hide stretched over a wooden framework, and smeared with lime on the outside, into which the honey-water is emptied so soon as it is brought in from the plantations, and which in about thirty-six hours begins to ferment, throwing up large bubbles of froth, losing its pristine transparent colour, and assuming a milky-whitish tint, which it permanently retains. It was formerly the habit to throw lime or a plant called "oegractli" into the honey-water, in order to produce a greater degree of fermentation, but now only a small quantity of "madue del pulque," or pulque already manufactured, is poured into the empty vats, which quickly deposits a thick and whitish-coloured sediment, upon which the new juice or honey-water is thrown in: the mixture after fermentation being ready for use is then sent off to the city of Mexico, Puebla, or the nearest market within a radius of twenty or thirty leagues, the pulque very often undergoing a considerable dilution with water by the way at the hands of the "arrieros," or carriers, who convey it in sheepskin bags upon

mules and donkeys. The quantity which thus annually enters the city of Mexico alone may be estimated on the average to be about 2,000,000 arrobas, and about 500,000 arrobas go to Puebla. The cost of transport alone has been calculated, taking the approximate average of one real as that of each arroba, to amount to 312,000 dollars. Not less than 20,000 mules and donkeys laden with the beverage enter the city every month by the gate leading to the maguey districts. To the quantity paying duty must also be added a considerable quantity which is smuggled in, and including this it may be calculated that about 50,000,000 bottles are now annually introduced into the city of Mexico, and the amount of money annually expended in the drink, at the average rate of about a quarter of a real per bottle, represents a sum of about 1,600,000 dollars, the number of "pulquerias," or pulque stores, within the capital (which, in the year 1771, when the increasing popularity of the beverage compelled the Spanish Viceroy to issue special regulations respecting licences to sell it, &c., amounted to thirty-four, afterwards increasing to eighty) now amounts to over five hundred. These stores are usually painted in gay colours outside, the wall behind the counter almost invariably exhibiting a rudely-executed allegorical fresco setting forth the "power of love" under the stimulating effects of the maguey plant, Venus, Bacchus, and the nymphs occupying prominent positions in the background, whilst a little image of the Virgin, with a lamp burning before it, occupies a retired corner of the establishment.

The best quality of the beverage is known under the different denominations of "pulque fino," "pulque dulce," or "pulque fuerte," whilst the inferior sort, the produce of the maguey planted in an inferior soil, and which is commonly consumed only by the poorer classes of Indians, by whom it is often manufactured in earthen pots, is called "ilachique," and there is another sort sold in the pulquerias composed of an admixture of this with some other sorts of a somewhat better description, denominated "pulque criollo," or creole pulque. On account of the manufacture of ilachique being erroneously supposed to be carried on by the poor Indian population alone, it is subject to the payment of a very slight duty, and little is known of the real amount of its consumption.

It is stated that a chemical analysis of pulque shows it to contain in different proportions, according to its quality, alcohol, mucilaginous fecula, sugar, water, and potash. It has been observed that the drunkenness produced by it under its different varieties is of a less violent description than that produced by another common beverage of the country, "chinguirits" (brandy made from the sugar-cane), and that *delirium tremens* is rarely produced by the immoderate use of the former, though often by that of the latter. It is also affirmed that the pulque-drinker is commonly long-lived, whilst the reverse is the case with regard to those addicted to chinguirits, and that the former beverage, notwithstanding its somewhat acid taste, is, probably on account of the fecula contained in it, peculiarly beneficial to women suckling their infants, and to those requiring a wholesome stimulant. The excesses committed by the lower orders during a riot occasioned by the high price of maize in the city of Mexico in the year 1692, being attributed to pulque-drinking, its use was prohibited altogether; this prohibition, however, was afterwards removed, and the Crown of Spain allowed its sale again under certain restrictions, incorporating the tax upon it with other colonial imposts, in which, in course of time, it became a highly important item, producing in some years a sum of more than 1,000,000 dollars to the Treasury. During the few years which preceded the war of independence the annual amount of the pulque tax was from about 600,000 to 700,000

dollars, but in the year 1810 it fell to about 500,000 dollars, and in 1811 to 400,000 dollars, and from that time to the present it has continued falling, until it has reached the present comparatively low average of about 200,000 dollars annually, the cause of so sensible a diminution being alone attributable to the extensive system of smuggling carried on, and to the increasing neglect and indifference prevailing amongst public functionaries during a long lapse of years of anarchy and confusion.

A spirit called "mezcal" is also made from the pulp of the maguey plant, heated in a kind of oven which is made in the ground, and which is of the simplest possible construction; and after fermentation has taken place, it is passed through an alembic two or three times until it attains about 60 to 80 degrees of strength. It can be made from every description of the maguey plant, but the varieties best adapted for its manufacture are called the "chino," "manso," and "nemetl." The consumption of this product, however, trifling compared with that of pulque. The manufacture of this spirit, often erroneously called a wine, "vino de mezcal," is almost exclusively carried on in the States of Guadalupe and San Luis de Potosi. That manufactured in the former State, generally distinguished under the name of "equilla," from the name of the place where it is principally made, is very generally consumed throughout the country, that manufactured in the latter is almost all sent to Guanajuato and Zacatecas, and is consumed by the mining labourers of those districts. In the two first-named States there are extensive tracts covered with what is termed "mague verde," or green maguey, which is too poor to produce a but the worst quality of pulque, and is consequently turned to the manufacture of mezcal. The plants, which grow spontaneously, are cut down at certain seasons, and are never allowed to flower, which causes a greater proportion of sap to concentrate within the trunk.

Besides these spirits the agave yields gum, said to be used in medicine, vinegar, sugar, &c. On this point were told that "the belief in the efficacy of the medicinal properties of the plant is universal among the Mexican peasantry to whom it has been handed down from time of remote antiquity; thus the juice of the leaf is said to be a specific for bites and contusions, the gum which is engendered in the lower part of the stem to cure the toothache, whilst various experiments upon the curative properties of the plant under different forms have been made by members of the medical profession in Mexico with satisfactory results." More recently, namely, in 1874, it was stated that General Sheridan, the United States officer, when in charge of a small army in Texas, had the misfortune to have an outbreak of scurvy amongst his men, and having heard that the juice of the Mexican agave possessed anti-scorbutic properties, and being entirely without the juice or any other remedy, started in search of the *Agave* plants, and having found a number, the juice was expressed and the men compelled to take it in liberal doses, the effect of which was to entirely stay the disease. It is stated to have a fetid smell, like putrid meat.

Perhaps some trials may be made in this country to test the medicinal value of pulque now that it has become introduced to our notice.

At a recent drug sale in London the Hemidesmus Root. Hemidesmus, or Indian sarsaparilla, root, which comprised the first consignment of the drug received here after a rather unusual interval of thirteen years. It was perfectly natural, therefore, that before these packages came up for sale the drug should have been reported to be scarce—indeed, it was unobtainable; but as retail druggists are so rarely called upon to supply either the root or its preparation,

the fact at the drug is scarce or otherwise is not likely to create excitement. Yet it happens that in St. Bartholomew's hospital, the largest medical institution in the metropolis, Indian sarsaparilla takes the place of the smilax root, so that all preparations of sarsaparilla used therein are characterized by the absence of what is generally known as hemidesmus root, and the hospital has the distinction of using hemidesmus root than all other consumers put together. Before the last arrival the hospital stock became exhausted, and one of the customs of the institution appeared to be threatened with extinction. The physicians of the hospital report that they find the preparations of hemidesmus to be as satisfactory as those of sarsaparilla. That is perhaps not saying much; nevertheless, when Dr. Ashburner introduced it in this country in 1831 it was said to increase the appetite, to act as a diuretic and improve the general health, plumpness, clearness and strength succeeding to emaciation, muddiness, and debility. It was also said to be useful in affections of the kidneys, scrofula, cutaneous diseases, and thrush. It had long been used in India, where it is held in high reputation, and is known under the names *Nannuri root* and *Ananto-mul*. It is the root of *Hemidesmus Indica*, which is the same plant as the *Periploca Indica* of Willdenow and the *Aselepias pseudosarsa* of Roxburgh. The root has a strong odour resembling tonka bean, this characteristic being particularly marked in the recent consignment. The odour is believed to be due to a volatile crystallisable "acid," which was separately obtained by Garden in 1837. Some years later (1843) Scott obtained stearoptene from the root by simple distillation with water, this body being probably identical with Garden's "acid." Garden proposed to call the "acid" "smilaspermic acid," but may, according to Pereira, "with more propriety be termed 'hemidesmic acid' or 'hemidesmin.'" The comparative importance of the drug is probably the reason why no pharmacist in these enlightened days has attempted to clear up the uncertainty regarding its active constituents. Mr. Pochington made a careful microscopic examination of it in 1877 and found it to possess such characters as entitled him to say that "hemidesmus is much more interesting to the microbotanist than to the micro-pharmacist." It was introduced into the British Pharmacopoeia in 1864, and still

remains, with its preparation, *syrupus hemidesmi*, but no other pharmacopoeia has had the hardihood to give the drug a place.

Business
and
Chivalry.

Mr. James Platt, the well-known author of "Business," "Morality," and many other treatises, has been himself trying to combine morality with business, and in a special instance has found it a costly experiment, as will be seen from our law reports this week. Mr. Platt is a wholesale draper as well as an author, and in the former capacity he undertook the wholesale agency for a certain Spot and Grease Extractor, which he sold to his customers at 9s. per dozen packets. He was led to believe after a time that the article he had been selling was just Sunlight Soap cut up into tablets and newly packed as a proprietary article. At any rate he came to the conclusion that a 3d. cake of Sunlight Soap would effect the purpose aimed at as well as a 1s. packet of the extractor. So he determined to give up the agency. That was moral, but it was not enough for Mr. Platt. His chivalric sentiments were aroused, and he thereupon issued to his customers circulars stating what he had discovered, offering the remainder of his stock of the extractor at 1d. per packet, and announcing his willingness to return 8d. on every 9d. he had received for the packets already sold. The inventor of the extractor has sued Mr. Platt for damages caused to him by the issue of this circular, and has managed to persuade a British jury to give him 5l. and costs. The 5l. will not go far as a substitute for the pretty trade Mr. Annat was building up, but the costs will come rather heavy on the defendant. We are bound to speak with every respect of the plaintiff's invention. The judge and jury evidently regarded it as "property," and as such sacred. Mr. Annat frankly admitted that the basis, or vehicle, or conveyance, as he termed it, of his extractor was Sunlight Soap; but he asserted that to each 1-oz. cake of Sunlight Soap he added a few drops of a wonderful essential oil such as could be extracted from the sawdust in Holman's liver-pad. We are not surprised to find that that oil is costly; science is at present not agreed whether it adds to the detergent power of the conveyance.



HOW LORD MILLTOWN DEALS WITH THE BRANCHES.

BRITISH AND FOREIGN CONSULS' REPORTS.

BELGIUM.

Petroleum. There was a falling-off in the receipts of American petroleum last year, the figures being, in 1887, 852,339 barrels, as compared to 936,915 barrels in 1886. Russian petroleum, on the other hand, is on the increase, about 100,000 barrels having been imported in the year 1887, against 91,000 barrels in 1886, at prices slightly below those quoted for American oils.

CHINA.

The Wenchow Drug Trade. Among the articles imported into Wenchow during the year 1887 opium figures to the extent of 64-00 piculs; China root, 137-44 piculs; aniline dyes, value 1,365*l.*; other dye-stuffs, 238-40 piculs; medicines, 2,601*l.*; safflower, 11-38 piculs; Japan wood, 407-89 piculs; vermilion, 18 piculs; varnish, 110-43 piculs; and white wax, 138-41 piculs; most of these items showing a considerable increase over the previous year.

Opium. In 1887 the Wenchow district yielded as large a crop of opium as it is capable of. The country, as viewed from a hill-top, was in many places one vast brilliant patch of poppy, with only sparse squares of green. The yield per acre of the best sort is 12 to 16 catties (say, 16 to 21 lbs.); of inferior sorts, 16 to 24 catties. The best drug, when the crop came in, sold at 2 dollars per catty, but rose to 4 dollars at the end of the year.

FRANCE.

The Chemical Trade at Rouen. During the year 1887 the rise in price of chemicals continued, notwithstanding that little business was done. Ammonia salts augmented in price on account of the demand for agricultural purposes, as did nitrate and nitric acid 10 per cent. for the same reason. Colouring matters, pyroligneous acid, and soaps remain the same. The rise in volatile alkalis continues, on account of the orders from the South of France, as a preventive against the mildew in the vines. In the third quarter of the year a rise took place in sub-products of wood, and in the end of the year there was another decided improvement. The arrangement between the large manufacturers has kept up the price of bicarbonate of soda, and the increasing demand for chemical manure has caused a change for the better. There is, altogether, a very satisfactory state of affairs in chemicals, and there appears to be every prospect that this will continue during the early months of 1888.

FRENCH COLONIES.

Protection in Cochinchina. The general tariff of France, with a few modifications, came into force on July 1, 1887, and as it severely handicaps all British manufactures, the trade between French Indo-China and Singapore has shrunk to very small proportions. The Saigon Chamber of Commerce has addressed a letter to the Minister for Colonies, setting forth the advantages of the tariff to the colony and to the natives, and complaining that the duties constitute purely and simply an aggravation of the taxes borne by the residents and natives without profit to anyone, because most foreign products continue to find sale, though in more limited quantities; that the sale of French goods has not materially increased, and it is not surprising, as, for example, French cotton goods cannot be sold except at from 20 to 35 per cent. dearer than foreign, notwithstanding the duties the latter bear; that this will always be the case so long as French manufacturers neglect to study the tastes and wants of buyers in quality, price, and appearance; that the Chamber firmly believes that the charges imposed upon the population had previously reached the utmost limit, if not more, and it is to be feared that the natives, over-burdened by taxes, will not produce more than the necessities of life, and that this commercial policy, if persevered in, will bring about the ruin of the colony. Imports of French or naturalised products are obliged to bear a certificate of origin; imports from France, Algeria, or French colonies are free of duty if imported direct, and by the same vessel in which they left those countries, or by a vessel of the same line.

JAPAN.

Taxation on the Drug Trade. Among the items forming a standing feature in the Japanese Imperial Budget are direct taxes affecting soy and drugs, which yield a not inconsiderable amount of revenue. Thus the tax on soy during 1887-88 is estimated to produce 212,202*l.* and that on drugs 69,203*l.*, both being considerably in excess of the yield in the preceding year.

The Drug Business in Manila. In a recent report the German Consul Manila refers to the relative largeness of importation of drugs, chemicals, and pharmaceutical preparations into the Philippine Islands, and points out that during the year 1886 no less than 465,251 pesos, or 87,234*l.* worth of these goods, weighing over 45 tons, arrived from abroad. In 1885 the value of the imports under this section was 469,964 pesos, and in 1884, 581,436 pesos. It is stated (though probably with some exaggeration) that the bulk of the pharmaceutical articles used in Manila is of German origin, although a large proportion of them are imported by way of England. In few important articles, however, such as chloroform, citric acid, and mustard flour, England continues to dominate the market. An extremely good demand exists for patent medicines, which are known by the name "especificos." Most of these come from France, America, and English patents following in order of importance. There is also a considerable sale in Manila for brandy and liqueurs. These are diluted in the local distilleries which have been established during the last few years. Aniline liqueur is a favourite article of consumption, but most of the essential oil used in its manufacture is obtained from China, and only a small proportion is oil distilled from European (Spanish) seed. The imports of perfumery represented, in 1886, a value of 45,478 pesos (8,527*l.*). Common soap manufactured locally, but toilet soaps have to be imported. Paints and varnishes are principally imported from the United Kingdom, English brands having acquired an established reputation which would render it difficult for German manufacturers to compete. All the same, the Consul thinks that his countrymen, by sending cheap consignments of good quality to leading houses, may ultimately succeed in obtaining a footing in this branch. Aniline dyes are much used, yet, though small lots are occasionally imported from Hong Kong through Chinese merchants. As regards business generally, the year 1886 does not appear to have been particularly distinguished either for exceptionally good or for unusually bad trade, but it is pointed out that the importance of Manila as a market for European goods is frequently overrated, and that particular care should be taken not to offer a line of samples of new articles through more than one importer at the time, as the price can only be kept up if the Chinese, who in all cases act as intermediaries between the native consumer and the European merchant, find it impossible to procure suitable goods from more than one dealer. These Chinese traders evidently a very slippery class to deal with, but their services seem indispensable, and they know it, so that European traders are pretty well at their mercy as regards credit and custom. The Chinese travellers bring European goods all over the islands, a task which natives could undertake owing to climatic obstacles while the natives themselves are not sufficiently intelligent to be reliable for it. It is expected that trade through Luzon, the principal island of the Philippine group, will derive considerable impetus from the completion of the railway system, the main line of which is now under construction, and will bring some of the richest and most fertile districts in direct communication with the capital. Sugar, tobacco, *abaca*, or Manila hemp, and coffee remain the staple products of the islands, while among the exports a pharmaceutical interest sapan wood, logwood, and the essential oil of ylang-ylang are the leading articles. The distillation of ylang-ylang is extending very rapidly throughout the island of Luzon, especially in the neighbourhood of Manila and in the province of Albay, and European markets have unfortunately been flooded with oil, much of it of very inferior quality, although a few of the old-established distillers maintain their reputation for excellence of product. The exports of ylang-ylang were 1,487 kilos. in 1884, 1,613 kilos. in 1885, and 1,487 kilos. in 1886.

NOTES ON INCOMPATIBILITIES IN PRESCRIPTIONS.

By HENRY CAMPBELL, Pharmaceutical Chemist.

(As read before the Midland Counties' Chemists' Association, April 26, 1888.)

A FEW preliminary remarks the author said that some time ago a chemist dispensed ferrous iodide with potassium chlorate. Iodine was liberated, and the subsequent death of the patient who took the medicine was attributed to gastric irritation caused by the free iodine. An action for damages was brought against the unfortunate pharmacist, on the ground that he ought to have known that such a combination might prove unsafe, and should have refused to dispense it. But it is impossible to decide in every case whether a mixture is safe or unsafe, much depends on proportions of ingredients, degree of dilution, order of mixing, and upon how long the mixture is kept before it is taken; and although a chemist might recognise the possibility of some degree of decomposition occurring, he might fairly hesitate to discredit the doctor in the eyes of the patient by refusing to dispense the prescription. Therefore in any doubtful case experience must decide, and not mere a rigid application of any rule.

Some persons consider that all drugs which react chemically are incompatible, and therefore are led to condemn mixtures: tinctures of henbane with solution of potash, of perchloride of iron with glycerine, of quinine sulphate with alkalies, of Goulard's solution with tincture of opium. Yet I dare say all of us have dispensed such combinations to the entire satisfaction of the prescribers, whose directions it is our duty to obey.

Still, dealing with presumably incompatible prescriptions we must generally speaking, rely on the following rules:—

1. If a dangerous decomposition may be expected to occur after the medicine has left our hands, we must take some precaution to obviate such danger, and in most cases that precaution will consist of a warning to the prescriber.

2. To label the suspected ingredients before mixing—or, in the language of the dispensing counter, “to keep them apart as far as possible.”

3. To mix them cold.

4. When strictly necessary to use mucilage (preferably that of tragacanth, because it contains less gum than acacia mucilage) in order to retard decomposition, or to suspend a precipitate.

In a paper read before a medical society, the following mixture was condemned:—

Liquoris hydrargyri perchloridi	..	℥ xx.
Potassii iodidi	.. .. .	gr. x.
Decocti cinchonæ ad	.. .. .	℥j.

on the ground that, as the first two ingredients form a well-known alkaloidal precipitant, a compound containing most of the mercury will fall, and be taken in the last dose. If the mixture is dispensed according to the second rule, the precipitate is so readily diffusible, and, after shaking, remains suspended so long, that the patient has plenty of time to pour out a dose, but, of course, he should be told to “shake the bottle.”

Again, it is considered that *Liquor strychninæ* must not be combined with bicarbonate of soda. When first asked to do so I expected that the liberated alkaloid would be precipitated. The following mixture has remained clear for weeks:—

Liquoris strychninæ	.. .. .	℥ v.
Sodii bicarbonatis	.. .. .	gr. xv.
Aquæ ad	.. .. .	℥j.

The dose of the strychnine solution contains $\frac{1}{22}$ grain of alkaloid, forming in the ounce mixture a solution of the strength 1 in 9,600, while the solubility of the alkaloid in water is about 1 in 5,700.

Potassium iodide is sometimes considered to be incompatible with strychnine. Now, in a case where 5 grains of the form were prescribed in an ounce of water with doses of *Liquor strychninæ*, gradually increased from 5 minims to 30 minims, no precipitation occurred until more than 20 minims of the liquor were used; and even then, by adding 1 drachm of tragacanth mucilage to each dose, reaction was

so retarded that, by preparing only sufficient medicine at a time to last one day, the patient took it with safety; but I may mention that he was under close medical surveillance. But in another case where 10 grains of the iodide were mixed with 20 minims of liquor strychninæ and an ounce of water, needle-like crystals appeared in twelve hours. This result was due, I found, to the slight alkalinity (allowed by the British Pharmacopœia) of the iodide; for when the solution of the salt was slightly acidified with hydrochloric acid before the liquor strychninæ was added, no crystals appeared for four days, and then in comparatively small quantity.

Another favourite combination is:—

Liquoris hydrargyri perchloridi	.. .. .	℥j.
Ammonia carbonatis	.. .. .	gr. v.
Potassii iodidi	.. .. .	gr. v.
Aquæ ad	.. .. .	℥j.

Although an alkaline carbonate forms a precipitate with mercuric chloride, still if in the above mixture the first and third ingredients are mixed, and the solution of the carbonate then added, no precipitate occurs, even after a month has elapsed. If common water be used, a slight precipitate of calcium carbonate forms, but it is free from mercury.

Again, tannic acid is said to be incompatible with mineral acids. Certainly a concentrated solution gives a white precipitate with dilute sulphuric acid; and tannin, being a glucoside, is decomposed by boiling with dilute acids; yet, dispensed according to our second and third rules, the following mixture presents no signs of decomposition:—

Acidi tannici	.. .. .	gr. x.
Acidi sulphurici diluti	.. .. .	℥xv.
Aquæ ad	.. .. .	℥j.

Most likely some change occurs; but if the prescriber is satisfied with the medicinal effect produced, it is not for the pharmacist to object. It may be urged that at all events such a mixture is of indefinite composition, and changing daily. But this is true of other valuable medicines; for instance, the relative proportions of strychnine and hyaline in tincture of nux vomica, the percentage of aldehyde in spirit of nitrous ether, or of codeine in opium, are all indefinite. Tannin is considered to be incompatible with alkaloids, because in strong solutions a dense precipitate occurs; but here, again, if we properly dispense the following the precipitate is readily diffused on shaking:—

Acidi tannici	.. .. .	gr. v.
Quininæ sulphatis	.. .. .	gr. ij.
Acidi sulphurici diluti	.. .. .	℥iij.
Aquæ ad	.. .. .	℥j.

Potassium bromide is said to be incompatible with metallic salts, and certainly it was not always safe to mix it with the liq. ferri perchlor. B.P. 1867; but the 1885 liquor being practically neutral forms in the following prescription a mixture in which very little bromine is liberated, usually none at all, yet it is wise to observe our first rule.

Liq. ferri perchloridi	.. .. .	℥xv.
Potassii bromidi	.. .. .	gr. xx.
Aquæ ad	.. .. .	℥j.

Now I come to cases in which “incompatibility” can be overcome by adding something to the prescription. When alkalies are mixed with quinine sulphate, the alkaloid is liberated, often in a sticky, resinous form, but if the powdered alkaloidal salt be mixed with water, and a proper quantity of tragacanth mucilage, and the alkali, previously dissolved in water, be then added, a presentable mixture results.

Syrup of iodide of iron gives with potassium iodide a precipitate of ferrous hydrate quickly changing to ferric hydrate, because the potassium iodide is usually alkaline; but if a little citric acid be first added to the solution of the potassium salt the mixture remains clear.

In a case where some “ear drops” were to contain cocaine hydrochlorate with borax, the alkaloid was partially precipitated, but re-dissolved with a trace of hydrochloric acid.

When additions have to be made we ought, if possible, to first obtain the sanction of the prescriber, and I may say that in my experience such sanction has always been freely accorded.

A habit of dependence upon the special knowledge of the pharmacist is, I have reason to believe, becoming more and more general among the members of the medical profession. It is for pharmacists to prove themselves worthy of it.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., April 26.

NEARLY all changes which have occurred since our last report have been towards lower prices, and business still continues in a most languid condition. Much attention has been bestowed on quinine, which is rapidly falling away towards the "lowest on record" price at which it was sold last year. The cinchona sales this week also showed a reduction in the value of bark. Citric, tartaric, and oxalic acids are rather weak, and if there is any change at all in these articles it is for the worse. There is a report that the price of glycerine has been considerably reduced by certain makers, but we have not been able to verify this. Arsenic is about the only important article in the chemical trade which is actually advancing in value. As regards drugs, we have to report some slight improvement in the Smyrna opium market; cod-liver oil is held at higher rates, and American peppermint oil is very firm. A better demand is also said to exist for Cape aloes and Mexican sarsaparilla. This is about all in that department. To-day's gum sales were rather irregular, and there was little demand, but Australian gum and ordinary Ghatti brought full prices. Good Kowrie gum sold well, but ordinary qualities were a little easier. Gum animi and Manila copal were quiet, and gum olibanum was only in demand for pickings. Gum tragacanth recently sold at lower rates, and shellac is also a trifle easier. Spices, with the exception of Jamaica ginger, are weak or lower.

GREAT INDIGNATION IS EXPRESSED in French and German journals at a recent judicial decision in England, affirming that income-tax must be paid in the United Kingdom not only on the profits made by agents of foreign houses acting in this country, but on the entire profits which accrue to the foreign merchant or manufacturer from his trade with the United Kingdom. French and German commercial bodies have memorialised their respective Governments to take measures for counteracting what they designate as a British attempt at destroying the Continental export trade.

OPIMUM-GROWING IN RUSSIA.—We understand that the Russian Government are about to make experiments during the present year to cultivate opium in different parts of the empire for commercial purposes. The Ministry of Domains have procured a supply of poppy seed in European Turkey, which has been distributed to the Imperial Schools of Agriculture in the Central and Southern provinces of European Russia. A supply of the implements used in opium cultivation in Turkey and Persia has also been ordered.

LOSS ON THE GERMAN SUBSIDISED STEAMSHIP LINES.—The German Imperial Mail Service, which was started some time ago with a heavy Government subsidy, has been worked at a heavy loss during the past year. According to the annual report of the Norddeutscher Lloyd, which has just been issued, the East Asiatic main and branch lines show a loss of 2,153,868 marks, the Australian main and branch lines a loss of 1,989,272 marks, and the Mediterranean line a loss of 459,037 marks. The total loss is therefore 4,602,177 marks, which, after deducting the imperial subsidy of 4,400,000 marks, leaves a net loss of 202,177 marks. To this must be added 366,552 marks for current repairs; 175,632 marks, share in the cost of administration; and 1,009,000 marks, representing 5 per cent. written off from the capital of the ships, and 20 per cent. from the furniture and fittings; making a total loss of 1,753,361 marks. This unsatisfactory

result is mainly due to losses of the branch line more particularly on the line to Samoa and Tonga, where the goods and passenger traffic is so small as to be scarcely profitable, in which respect it resembles the Mediterranean line.

UNDER THE NAME OF THE HOLLAND STEAMSHIP COMPANY a service of steamers has been started at Amsterdam, which purposes to run regularly between Amsterdam, Netherlands, India, and other ports. The capital has been fixed at 600,000*l.* in shares of 500*l.* each, which are to be issued in successive series. The first issue of 240 shares of 120,000*l.* has been entirely taken up by the Netherlands India Steam Navigation Company at the Hague and some private investors. The Netherlands India Company will transfer a share of its steamers to the new company against 200 shares of 100,000*l.* It is expected that the service will be opened in July next with four steamers, and that severe competition will then exist with the existing Nederland and Rotterdam Lloyd Companies.

From time to time merchants in different parts of the United Kingdom have made representations to the Treasury in favour of an extension of the official day in the Customs, so that they may not be charged overtime for the supervision of the officers when ships are "working" after five o'clock. It is said that the Treasury authorities have been considering this question in conjunction with the Board of Customs, and that some plan is likely to be devised for the requirements of the traders.

MR. JOHN SELLERS, of the firm of Reynolds & Sellers, drug brokers, of 3 Mincing Lane, E.C., sailed for Melbourne this week, on a trip for the benefit of his health, which has been for a long time in an unsatisfactory state. Mr. Sellers intends to stay in Australia two or three months.

ACIDS.—Last week's advance for Citric acid has not been quite maintained, and to-day 1*s.* 7*d.* per lb. would buy of the spot, but we have not heard that any business has been done at that figure. In Oxalic there is practically no trade, 3½*d.* per lb. being the nearest quotation. Tartaric acid is said in some quarters to be steadier, but we do not think it can be quoted above 1*s.* 5½*d.* to 1*s.* 5¾*d.* for foreign and 1*s.* 6¼*d.* for English.

ALOES.—Since the last auctions a better demand is said to have sprung up for Cape aloes, resulting in somewhat higher prices being paid.

AMMONIA SALTS.—Carbonate lifeless at 4*d.* per lb., less 20 per cent. Sal ammoniac remains unchanged in price at 34*s.* for firsts and 32*s.* for seconds. Sulphate is cheaper and declining, at 11*l.* 15*s.* in London for 24 per cent. grey, and 11*l.* 12*s.* 6*d.* at Hull.

ANISE remains very low in price, at 19*s.* to 21*s.* for Russian seed, while up to 40*s.* and 41*s.* is paid for Italian and Spanish per cwt. for Spanish (Alicante).

ARSENIC very firm at 12*s.* 6*s.* to 13*s.* per cwt. for white powder on the spot.

BLEACHING POWDER, firm at 8*l.* 10*s.* to 8*l.* 12*s.* on the spot, and 7*l.* 10*s.* on the Tyne.

BORAX still nominally 30*s.* for English brand, but some weakness is apparent, and 29*s.* per cwt. would now be bought.

CAMPHOR.—At the end of last week the Ophe brought 1,127 tubs Japan camphor, via Hamburg. Nominally 72*s.* 6*d.* is the present spot price for Japan, but it is said that 70*s.* c.i.f. has been paid, which would point to a firmer tendency.

CANARY SEED.—Large arrivals have come to hand, and prices, although considerable quantities have changed hands, have had a declining tendency throughout. It is said that holders in Turkey have held back a large portion of the last crop in the hope of better prices, but they are disappointed, and are now compelled to let it go. Holland also supplies continue on a liberal scale, and are difficult to get. High to moderate quantities, and sells fairly well. In the United Kingdom

market is still depressed, prices ranging about at par with our own, and consequently business between the two countries is at a standstill. Of *La Plata* seed only little is offered at present for prompt delivery. The quotations are now: *Turkish* seed, 43s. to 46s.; *Dutch*, 43s. to 47s.; *Spanish*, 4s. to 58s.; *Morocco*, 43s. to 50s.; and *La Plata*, 40s. to 46s. per 464 ex warehouse.

CARAMEY SEED is pressed for sale, and prices are giving way. The stock in Holland is not unusually large, but holders seem to have but little stability. The quotations are now: *French*, 24s. 6d. to 25s., and *Russian*, 20s. to 21s., per cwt. ex warehouse.

CASCA SAGRADA.—Holders here still require 70s. per cwt. With regard to the rumour which we reported in our last issue that the recent advance has brought forward supplies to the Californian trading centres, another dealer informs us that there can be no truth in this, as there is no stock left to speak of anywhere, and the new crop does not arrive till September.

CASTLEUM.—The Hudson's Bay Company will offer for sale 468 lbs. May 2 next.

CINCHONA.—The periodical auctions on Tuesday included 3,143 packages, offering an assortment rather below the average regards quality. It was generally expected that prices would rule lower, and such, indeed, was the case, holders offering pretty freely, and being content to accept a reduction of 10 to 15 per cent. on the recent values, the unit at the present sales not exceeding 2d. Of the 1,841 packages Ceylon bark, fully two-thirds was sold, and rather over one-half of the 623 packages of Indian bark, among which the best selection was found. Eighty-seven packages Java cinchona were all disposed of, but of the very small supply 592 packages of South American growth the bulk was bought in. The following prices were paid:—**CEYLON CINCHONA**: *Succirubra*, natural branch, 1½d. to 2d.; chips, dull, quill, to fair, 2d. to 4d.; shavings, 2½d. to 4½d.; root, dull mid to good, 2d. to 4½d.; quill, broken, 3d.; dull and irregular 4½d.; renewed, low common woody to good, mostly shaving 2d. to 9d. *Officinalis*, branch, 2½d.; chips, 2½d. to 4½d.; ske shavings, 3d. to 6d.; renewed medium to fine, 4d. to 1. *Hybrid*, &c., chips, 2½d. to 3d.; renewed, 5d. to 7d. **INDIAN CINCHONA**.—Wynaad and Mysore-grown, mostly *Succirubra* chips, dry bright quilly, 2½d. to 4½d.; spoke shaving 1½d. to 3½d.; root, 2d. to 2½d.; quill, crushed and broken, 1d. to 4d.; small dull druggists', 5d.; renewed, 5d. to 8½d. *Ledger*, &c., natural, 2d. to 8d.; renewed, 7d. to 7½d. **JAVA CINCHONA**.—Stem chips, 5d.; fine bold druggists' quill, 8 to 10½d. per lb. **SOUTH AMERICAN CINCHONA**.—*Cupread*, 2 to 4½d. *Calisaya* from the Bolivian plantations, in broken quills, 5d. to 7½d. The shipments of cinchona from Clon, according to the latest advices, are again assuming very large proportions, and now almost equal those of the previous season. The French official statistics are given as follows:—

	1886	1887	1888
	Tons	Tons	Tons
Exports to March 31 ..	267	215	201
Consumption „ ..	103	128	93
Imports „ ..	63	33	40

COCOA is quiet, and offers at 9d. to 9½d. for German in vials.

COPPER (SULPHATE) remains firm at 21l. to 21l. 5s. for ordinary firsts.

CREAT OF TARTAR.—Firsts are worth 122s. per cwt., and second, 118s. to 119s. per cwt. There has been a somewhat better inquiry during the last few days, it is said.

CUM SEED steady and rather scarce on the spot. *Malta* seed is worth up to 50s. per cwt., and *Bombay* 37s. to 39s.

CURT remains steady. Among the sales reported this week in slabs at 30s. 6d. per cwt.

FENBEEK SEED is very firm with an advancing tendency, 3s. to 3s. 9d. being quoted for good *Megadore*, and 6s. 6d. 7s. for new *Egyptian* seed.

GAMER.—The market is very quiet. 21s. 9d. per cwt. has been paid for several lots of block on the spot during the week, and that price still prevails at the close.

GLYCERINE.—It is reported that the older German glycerine

makers have suddenly reduced their quotations 15s. per cwt. in order to defeat the competition which has sprung up recently, and now quote double distilled 1-260 s.g. at 60s. to 62s. 6d. per cwt.; but upon making inquiry we find that agents here still adhere to the quotation of 75s., and speak of the article as being very firm.

GUM ARABIC.—At to-day's auctions over 2,300 packages were offered for sale, but only a small part was disposed of at irregular rates. Very little interest was manifested for Amrad gums, but Ghattys brought full, and occasionally—for inferior lots—rather higher prices. *Australian* gums, of which 116 packages were offered, also sold dear, at 63s. 6d. to 66s. 6d. per cwt. for dark red woody mixed, and 70s. to 76s. 6d. for fair palish. *Aden* and *Egyptian Amrad* gums were mostly bought in, though some ordinary Aden sorts sold at 90s. per cwt. For *Indian Amrad* the following prices were realised:—Low dark blocky, 37s. to 43s.; fair reddish drop, 57s.; amberly ditto, 70s.; fair glassy Oomra, 80s.; pickings, from 16s. to 40s. 6d.; common to ordinary siftings, 24s. to 30s.; while *Ghattys* sold:—Fair to good, 55s. to 65s. 6d.; superior, 115s.; pickings, 29s. 6d. to 38s.; common, 19s.; siftings, 29s. to 35s. per cwt. The Liverpool market has remained without further arrivals of *Brazilian* gum, and the existing stock is now in only a small compass. A steady demand has prevailed, but business is rather on a smaller scale, embracing 370 packages at 52s. 6d. to 55s. per cwt. for fair medium, part blocky, and 57s. 6d. to 60s. per cwt. for fairly free gum. A few small lots of *Egyptian Amrad* gum have been sold at 135s. for fine pale, and 47s. 6d. for very common rough. There have also been fair sales of *Galam Senegal* at 142s. 6d. to 149s. 6d. per cwt., according to quality.

GUM TRAGACANTH.—Last Friday over 3,000 packages Syrian were offered for sale by auction, but there was scarcely any demand, and only a very small proportion was sold at lower rates; good pale firsts 7l., ordinary to good thirds 80s. to 5l., and common to fairly good fourths at 65s. to 77s. 6d. per cwt. Ordinary to fine siftings brought 55s. to 92s. 6d., and pickings from 25s. to 40s. per cwt.

IODINE firm at 9d. per oz.; iodide of potassium 11s. per lb.

LINSEED of fine quality is only in moderate supply, and with a good demand prices are well maintained. Finest *Dutch* is held up to 45s. *Hungarian*, 42s. *Russian*, according to quality, 37s. to 40s. per 416 lbs. *Sicilian* seed is firm at 45s. per 424 lbs. *Bombay*, 39s. 6d. *Calcutta*, 39s.

MERCURIALS.—Prices have now attained greater steadiness, owing to the less violent fluctuations in the quicksilver quotations. Makers now quote:—*Calomel*, 2s. 11d.; *White precipitate*, 3s. 1d.; *Red precipitate*, 3s. 2d.; *Corrosive sublimate*, 2s. 3d.; *Blue pill*, 1s. 11d.; *Mercurial ointment*, 1s. 10d.; and *Vermilion* (English), 2s. 6d. per lb.

MUSK.—It is thought that at next week's auctions the price will show a further reduction.

MUSTARD SEED is being pressed on the market, and sells at 7s. 6d. to 9s. per bushel for fine white, and 9s. to 12s. for brown *English*. The new crop of *Bombay* seed is now being shipped. The quotation for this variety rules at 5s. to 6s.

NUX VOMICA.—The *Pekin*, just arrived from Bombay, had on board 34 bags.

OIL (COCOANUT).—There is very little animation in the market. For *Ceylon* oil on the spot 24l. is quoted, but for arrival 23l. 10s. is asked, although there are no buyers at that price. For *Cochin* oil 27l. to 27l. 10s. is the nearest spot price, while 26l. to 26l. 10s. would buy for arrival. Business in *Mauritius* oil at 25l. is reported.

OIL (COD-LIVER).—A firmer feeling prevails, both here and in Norway, the Finnermarken fishing having been, up till last Saturday, a total failure. This fishing will not be over until well towards the end of May, but it is not expected that it will, in any case, yield any considerable results; and as it usually gives about one-fourth of the entire crop, its failure is likely to further influence the price. The lowest price quoted for steam refined Lofoden is now 63s., but other importers ask 70s. to 75s. per barrel, and all are taking up an attitude of reserve.

OILS (ESSENTIAL).—There is rather a weaker feeling for *Star anise*, and 6s. 2d. per lb. would probably be accepted.

Oil of *Cassia* is very quiet, the nearest spot price being 3s. per lb. *Citronella* remains very neglected at $1\frac{1}{2}$ d. per oz. *Bergamot*, fairly steady, and quoted at from 7s. 9d. to 9s. per lb. according to quality. *Lavender*, very firm for French and with a rising tendency for English. Finest Mitcham has been sold up to 34s. per lb., but some holders would not now sell at that price. *Lemon*, fairly steady and quoted as usual at widely varying prices, ranging from 3s. 9d. per lb. for Messina, to 5s. 3d. or even 5s. 6d. for fine Palermo. American oil of *Peppermint* (H.G.H.) is very firm at 10s. 6d. per lb., and it is generally said that in Michigan, which is the State giving the tone to the market, farmers have only planted one-fourth, or less, of the acreage which they had under cultivation last year, while in addition the young plants have been damaged by the weather. *Otto of rose*, firm, but without change. *French Thyme*: the new crop is now arriving, and quoted at 4s. per lb. for good quality.

OIL (OLIVE) remains extremely quiet at 32l. for *Mogadore*, 34l. to 35l. for *Messina* and *Gioja*, and 36l. to 37l. for *Spanish* oil. Reports from Naples say that the oil market there remains in an abnormal position. In Gallipoli there have been no transactions worth mentioning, and prices have been nominally quoted at 33l. to 33l. 10s. per tun, f.o.b., without sellers at the lower or buyers at the higher price, and there is no foreseeing what the next fluctuation will be, or on what terms the outstanding accounts for the May settlement will be closed. The entire business has been concentrated on *Gioja* oils, which closed on April 16 at 30l. to 30l. 10s. per tun, f.o.b., according to quality. These low prices are due entirely to the accumulation of stocks, as the crop has not only been abundant, but also unusually late, and it is only now that the new oils are clearing in quantity.

A large business has, however, been done, and there are heavy engagements for England and elsewhere. The budding of the olives has commenced in the earlier districts, but it is yet too early to form a reliable opinion as to the prospects. The winter has been favourable, but there are complaints of drought at Gallipoli, Taranto, and other districts in the province of Lecce, whereas at *Gioja* no crop of any importance can be expected.

OIL (PALM) remains neglected at 21l. 10s. for fine *Lagos*.

OPIUM.—There is not much doing here, except in soft shipping, of which about 200 cases are stated to have been exported within the last fortnight. The Smyrna market, according to the most recent reports, has been rather firmer, a number of holders appearing to attach some credence to the persistent reports of damage to the growing crop. The business transacted has not been large, amounting only to about forty cases in the week ending April 14, old and new tale-qual Karahissar and Yerli at 8s. 11d. to 9s. 10d. per lb., and old Karahissar with "visite" at 9s. 10d. per lb. The true cause of the momentary rise is said to have been not so much the belief that the coming crop was damaged as the fact that operators who had sold large quantities for delivery to America were compelled to cover. The growing crop is now beginning to pass through its most critical period, and a few days of unfavourable weather, such as hot south wind, may reduce the yield by some thousands of packages. Meantime, no such eventuality has yet occurred, and the brightest hopes are entertained of the crop in Asia Minor, rain having fallen in all the growing districts. Rain has also fallen in the province of Salonica, and considerably improved the prospects of the growing crop in that locality.

PATCHOULY LEAVES.—Our market is now becoming well supplied with these leaves, but most of the parcels that are for sale are unfortunately of very indifferent quality. A further shipment of 46 bales arrived this week per *Glenavon* from Singapore.

POTASH SALTS.—*Bichromate* rules very quite at $4\frac{1}{2}$ d. per lb., *Chlorate* steady at $5\frac{1}{2}$ d. per lb. for pure, a very low price and one which does not pay the makers, although there are more sellers than buyers now at that figure. *Prussiate* tending lower, at $6\frac{1}{2}$ d. per lb. for foreign yellow.

QUICKSILVER.—On Friday last the importer raised his price from 7l. to 7l. 5s., at which it has since remained; but the market closes weak, second-hand owners having to-day accepted 6l. 19s.

QUININE.—Since last week a rather large business has been done, especially in German brands, at constantly declining prices, and to-day the lowest point was reached which has prevailed for many months, with a sale of 10,000 oz. *Brunswick* in bulk, first hand at 1s. $4\frac{1}{2}$ d. per oz.; second-hand parcels of this brand are said to have been dealt in, both to-day and yesterday, at 1s. 4d. per oz.; but this we have not been able to ascertain definitely. Most makers, however, have not followed the decline at the same rate at which it has progressed. *Hova's* quotations have been reduced to 2s. for vials and 1s. 10d. for bulk. *Whiffen's* to 1s. 10d. and 1s. 8d. respectively. The *Fabbrica Lombarda* does not quote. *Jobst and Zimmer* stand at 1s. 6d. B. & S. at 1s. 5d. and the *Brunswick* factory, as already reported, at 1s. $4\frac{1}{2}$ d. per oz. There are not wanting people who still prefer to have confidence in the article, and who aim that the makers are merely depressing the market and then selling small lots at lower and lower prices so as to induce weak holders to get rid of their stock, which the makers buy up and tender in fulfilment of contracts due; but most people incline to the belief that we shall soon be down again to the lowest price on record, or even that "shilling quinine" is looming in the distance. The increased exports of bark from Ceylon, which are said to nearly equal last year's, the presence of an exceptionally heavy stock at Colombo, and the rather unfavourable London statistics, all argue in favour of the latter view.

RAPESEED scarce, and held at firm prices. Fine *English*, 48s. to 53s. per 424 lbs.; *French*, 48s. to 50s. per 424 lbs. Crushing rapeseed unaltered.

RHUBARB.—Our stock was increased this week by an arrival of 85 cases per *Diomed* from China.

SARSAPARILLA.—Honduras remains neglected, but there has been a better demand for Mexican lately, which is quoted at $4\frac{1}{2}$ d. to $4\frac{3}{4}$ d. per lb., London terms.

SHELLAC.—The week commenced with private sales of *Garnet lac* AC for delivery (ship declared) at 35s. per cwt., c.i.f. terms. At the auctions on Tuesday a pretty good supply, numbering 867 cases, was offered, the whole being practically "without reserve," and a decline of 1s. per cwt. on many lots and a little less on others. The following prices were paid:—*Second orange*, worked, good fair bright, part palish, 43s. 6d. to 44s. 6d.; fair reddish, 42s. 6d. to 43s.; ordinary weak and livery, 41s. to 42s.; unworked fair, 42s. to 43s.; ordinary livery, 40s. to 41s. 6d.; *Button*, worked coloury fourth or dark, 33s. 6d. to 34s. Since the auctions further sales of AC *Garnet lac* have sold to arrive at 35s. c.i.f., and third *Button lac*, June-July shipment at 37s. c.i.f., so that there has been very little change in value during the week.

SODA SALTS.—*Ash* is quoted on the Tyne at 1d. less $7\frac{1}{2}$ d. per cent. *Bicarbonate*: the nearest price is 5l. 5s. per ton. *Caustic* is quoted at 7l. 7s. 6d. for 70 per cent. spot. *Crystals* are quiet, but pretty firmly held at 45s. 6d. here and 39s. 6d. on the Tyne. *Nitrate* easier at 10s. to 10s. 9d. per cwt. on the spot, according to quality; common for May delivery, 9s. 9d. to 10s. per cwt.

SPICES.—*Arrowroot* remains without improvement; good medium to good ordinary St. Vincent $2\frac{1}{2}$ d. to $2\frac{3}{4}$ d. per lb. A slightly better tone existed at the weekly auctions for cassia lignea, and 515 boxes sold at 21s. to 22s. for old import (1874 and 1880). *Capsicums* are quoted lower, bright Natal off stalk at 41s., good long red Japan at 26s. per cwt. *Chillies* firm with small sales of Zanzibar at 29s. to 29s. 6d. For *Cloves* the tendency is decidedly less firm, Zanzibar being sold at from $6\frac{1}{2}$ d. for ordinary dark to $7\frac{1}{2}$ d. per lb. for fine bold. *Ginger* is from 1s. to 3s. cheaper for Cochin than the exception of half-cut, which realised very full prices and Jamaica is also better. At the auctions Cochin cuttings and brought from 12s. 6d. to 17s.; rough, 21s. to 31s.; part cut, 34s. to 37s. 6d.; and dull to good bold cut, 25s. 6d. to 64s. 6d. per cwt. For fair to good fair bright Jamaica 57s. 6d. to 65s. per cwt. was paid. The advance which has recently been paid for mace and nutmegs has not been fully maintained. *Pepper* is quiet as regards black, and somewhat cheaper for white. Privately black Singapore sold at 3d. per lb., and at auction $11\frac{1}{2}$ d. was paid for white Singapore, $11\frac{1}{2}$ d. for ditto Siam, and $9\frac{1}{2}$ d. for ordinary white Penang. *Vanilla* steady at 2d. to $2\frac{1}{2}$ d. for ordinary grey to fair.

SULPHUR.—*English* make is held at 8s. for flour, and 6s. 6d. for roll; but for foreign 7s. 6d. and 5s. 6d. respectively is noted.

TEA.—Prices for *China* tea remain steady for all grades of Congous, and all sorts over 9d. growing scarcer and scarcer, and very handsome market profits being realised by those dealers and speculators who have held on to their early purchases, and resisted the temptation to sell when they would only have got 1d. per lb. or so profit. For example, *Winghous*, well bought last August at 11d. per lb., would now realise 1s. 4d. to 1s. 6d. per lb., though it almost requires more than human nature to refuse a profit of 1½d. or 2d. per lb., and in consequence these teas, bought last summer, have been turned over at smaller profits again and again, passing from hand to hand many times as the market has advanced. Fine *Chingwos* are becoming very scarce, and but little is left in importers' hands. Sales of *China* teas are rather slow for the week, Tuesday's consisting of 16,801 packages, and there is no alteration to report, low *Kaisous* fetching 3d. as last week. On Tuesday, first crop *Paklum* brought 1s. fine first crop *Soomoo*, 1s. 0½d. to 1s. 0½d.; and *S. Capers* 1s. to 11½d. for good olive sort; counterpart sold at 1s. 1d. *Assams* are in small supply for the week, and keenly competed for, prices being as firm as ever. There is a feeling at there will not be any fall in prices in the immediate future, but dealers seem to think it nevertheless advisable to buy from hand to mouth, as *Assams* in general—except *peaps*, grades from 11d. to 1s. 4d.—are undoubtedly considerably above the average range of prices. *Ceylons* are in light supply, teas under 1s. remaining firm, and finest grades fetching long prices, a very fine broken *Pekoe* fetching 2s. 5d. per lb. on Wednesday.

CHEMICALS IN THE NORTH OF ENGLAND.

OUR markets generally have been less active this week, and though shipments at the moment are heavy, they refer most to orders executed some time back, and whilst these shipments steady the market and somewhat harden prices, the outlook is not so bright, when the pressure for prompt delivery is at an end.

The *Alkan* market also is in a very unsatisfactory condition, for the proposed new tariff makes such changes in the duties as affects so many chemicals in a most important manner, that at present buyers on the other side are waiting and looking on.

ACIDS are somewhat irregular. *Tartaric* in better demand at 1s. 6d. per lb. *Citric* is steady but not so active at 1s. 7d. *Oxalic* is quiet at 3½d. *Boracic* is dearer and the price has advanced 2s., but this advance has really taken place in Italy, and is not being responded to in our market.

BORAX prices without change, but holders are firm at 30l. per ton with a fair inquiry. 305 sacks and 100 barrels of *California* have arrived per *Dawpool*, and 32l. is now asked for this description.

POTASHES.—*Prussiate* has been very dull, and the advices from Germany report an easier tone, with sellers at 6½d. per lb. *Chlorate* has met with more inquiry and is firmer; orders are coming in more freely, and the price remains steady at 5½d. per lb.

SODA SALT.—The demand for *Asht* has been very steady, and prices are firm at 1d. to 1½d. It is a somewhat remarkable fact at the shipments of ash to the United States are 6,000 tons in excess of the period last year. *Caustic Soda* is again dear, there having been an active demand for prompt shipment to Canada and Russia, and stocks at the works have been materially reduced. Closing quotations are:—For cream, 60 per cent., at 5l. 15s.; white, 60 per cent., at 6l.; ditto, 70 per cent., at 7l. *Bichromate* is in more request, and firmly held at 4½d. per lb.

NOTES ON COCA LEAVES.

WE announced a few weeks ago that Dr. H. H. Rusby, of New York, had been lecturing at the Philadelphia College of Pharmacy on South American drugs and remedies, as testified by himself during a recent journey

through parts of Brazil and some of the adjoining republics. When describing coca the doctor showed specimens of the two principal commercial varieties, viz., Bolivian and Peruvian coca, and explained the difference in their appearance. The specimen of Peruvian coca Dr. Rusby gathered at the confluence of two rivers, one coming from Cuzco, in Peru, and the other from La Paz, in Bolivia; but unfortunately the names of these rivers are not given, nor are there, so far as we are aware, any rivers originating near Cuzco and La Paz which meet at all on Peruvian or Bolivian territory. Judging, however, from the doctor's subsequent remarks, the River Purus, which divides the two countries, is meant. All the way down this river, coming from Bolivia, continued the lecturer, we find the wild coca. It is of the Bolivian form, but as soon as we strike the other river we find the larger leaves, the Peruvian form. There is also a form of diseased coca, called Taja. It is probably a fungus which produces this peculiar condition. We know the disease can be produced in the leaf by simply picking them carelessly so that the twigs are wounded. Then when the new leaves are produced they present this appearance. This is a sufficient comment upon the idea which has lately been advanced by a writer, to the effect that some of the coca leaves which reach the market are beaten off from the plants with poles, an opinion which is evidently erroneous. If an attempt were made to beat the leaves from the plant with poles, the owner would never get another crop. Two other forms of coca, or rather erythroxyton, grow throughout the eastern part of Bolivia and even through Brazil. The two main varieties of coca, the Bolivian and Peruvian, are so different that one Bolivian writer has described the Bolivian form under the name of Erythroxyton Bolivianum. The name, however, is not correct; both are Erythroxyton coca. Two varieties are distinguished not only by the leaves but by the fruits, which are larger in the Bolivian species, while the leaves are larger in the Peruvian species. The Bolivian variety is much esteemed by the Peruvians, they saving enough from their scanty earnings to purchase one-third of the Bolivian product, although you can obtain the native article at a much lower price. Dr. Rusby then entered into the question of the chemical composition of the leaves, and spoke about the two methods of estimating the cocaine which the coca leaves contain. The first is to extract it in the pure form and weigh it. This method, the lecturer said, was impossible for me; I was therefore obliged to resort to the test by titration, and this test is as follows: We obtain the cocaine in an aqueous acid solution, about two drachms of the solution representing two and one-half grammes of leaves. This can now be tested with Mayer's reagent. As the precipitate is formed this precipitate is filtered, and the reagent again added. When no more precipitation occurs we assume that the right amount of reagent has been used, and for every cubic centimetre so used we have eight milligrammes of cocaine in the leaves. Now, estimating by this test in this country the leaves will yield from about one-half to three-quarters of one per cent. of cocaine. As I estimated them in their own country, the leaves being fresh or recently dried, taking an equal weight of fresh leaves, drying them, and then assaying them, I obtained from two to four per cent. of cocaine. I took specimens of the same leaves which I had thus assayed and sent them to the United States, where they were assayed, and they yielded the same amount which they are said to yield in this country, namely, from one-half to three-fourths of one per cent. It was evident that I had made a mistake in my process, or that the composition of the leaves was very different in their own home. On my return to La Paz for the second time I made a very elaborate series of experiments, looking towards the assaying of the different parts of the plants. I took the best methods I could, collecting and drying at the proper time of the year, taking into account the age of the leaves, and I found my former results confirmed. But I also found on this occasion that on rendering my solution slightly alkaline and washing it with ether, the ether carried away only the cocaine, which was found to be about three-fourths of one per cent., as in this country. This is, then, one of the means of accounting for the difference—an entirely different substance from the cocaine, but producing the same reaction with Mayer's reagent, being left behind in the alkaline aqueous solution, seeming to prove that the composition of the leaves is different in their own home from what it is after they are exported.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

The Pharmacy Bill.

SIR,—Will you kindly consent to be the medium for relieving the anxiety of numerous unqualified managers, particulars of whose claims for exemption at the request of "Alpha" I submitted to many influential members of Parliament.

I am pleased to announce the receipt of an official statement "that Sir Henry Roscoe and Dr. Farquharson will amend the clause *re* branch shops in committee in such way as to exempt existing managers of a certain status."

This very satisfactory arrangement is really a matter for all-round congratulation, as it removes all reasonable ground for opposition to a Bill from which the pharmacy of the future will date its first real claim to professional status.

I am, sir, yours faithfully,

LEO ATKINSON.

SIR,—Your remarks in the last issue of your journal are to the point. It is clear that our legislators have very hazy notions of the Pharmacy Act, therefore, though it has been already pointed out, I would again urge upon chemists in every constituency the necessity of, by some joint action, enlightening their member upon the subject. The action of the Incorporated Society of Chemists and Druggists will have, if any, a beneficial effect; but one collective petition is not likely to have great results of itself. If chemists as a body do not make some show of energy and determination they will miss the best opportunity of obtaining useful legislation they have had, or are likely to have, for some time. As to the opposition to the Bill, if Parliament agree that the position of dealers in poisons and dispensers of medicines in the course of a generation or so will be such as to demand an authorised course of study, I do not see why chemists at the present time should disturb themselves about it. I for one do not think the enforced curriculum necessary, nor do I think it will pass; but as its influence upon the business would be beneficial rather than otherwise, I am willing that it should take its chance.

Will the opponents of the "Milltown" clause kindly tell us upon what grounds they base their objection? Do they object to the first principle upon which pharmacy legislation rests—that every chemists' shop should be under the immediate control of a qualified person? Then their opposition does not go far enough; they ought to propose the repeal of the Pharmacy Act. Is their opposition based upon sympathy with possible sufferers? In that case they should proceed by another amendment to assist those men on to the register, with or without a modified examination. Parliament has decided that retailers of poisons should be legally qualified persons—then none but qualified persons should be allowed to sell poisons in any form; but before we as qualified persons can establish our claim to a monopoly in supplying poisons in any form, we must show that all our shops are managed, as well as owned, by qualified men.

Yours,

Aigbenth Road, Liverpool, April 24.

J. SMITH.

SIR,—The letter of "East Anglia" in your last issue is an admirable one, and sets out in a clear and able manner the absurd, anomalous, and unbearable position in which chemists are finding themselves. This position is partly caused, no doubt, by the excessive and desperate competition of the present day, but mainly, I contend, through the gross and I had almost said criminal, blunders of the Pharmaceutical Society, in drawing their Pharmacy Act in such a loose manner, that it has already been the ruin of many a chemist through the facilities it has given to the "store" and other companies of depriving them of their legitimate trade. I say legitimate trade, because I maintain, with "East Anglia," that when a man is compelled by law to pass certain examinations to qualify him to dispense medicines and deal in poisonous drugs, he should find, when he has passed, that he has those medicines to dispense and those drugs to sell, and that no unqualified man should be allowed to compete with him. The chemist, so far as I know, is the only individual who passes an examination and obtains a monopoly thereby. The question is—What is to be done? Will some one suggest something practicable? I cannot but compel the Pharmaceutical Society to move? They do not seem inclined to budge an inch to remedy the fall error in the Pharmacy Act—nay, they seem even to have abandoned their pet offspring, the "curriculum," now it has sensible amendment attached to it. Is it not possible for the great majority of chemists outside the Pharmaceutical Society to band themselves together, and to insist either that the Society shall set to work at once to remedy some of its past errors, or that, at least, the great body of chemists and druggists throughout the kingdom shall be duly and proportionately represented on the Council?

Yours truly,

Marc'hester, April 23. CHEMIST AND DRUGGIST. (43.13.)

SIR,—I am glad to find you are giving the cause of the new Pharmacy Bill relating to branch shops your cordial support. As far as I can judge, the opposition to this clause is confined almost exclusively to the unqualified managers themselves, who, like the foolish virgins, are beginning to cry out when they find the day of grace is over.

These gentlemen talk a great deal about the qualification given by experience, as compared with the mere passing of an examination. Legally, the "experience" qualification is not recognised. Surely, after all these years of experience, they ought, should the Bill be carried in its present form, to be able to qualify themselves by passing the examination much more easily and with much less study and expense than would be required by those who have only recently emerged from their apprenticeship. That this principle, embodied in the new clause, will eventually become law I have no doubt, and hope it may do so speedily, in justice to those who have passed their examinations. "A chemist of long and varied experience" sneers at many who are at the trouble and expense of obtaining a high qualification. He says they are above mixing a pound of pain and performing such duties as would often be required in their business. I would like to know how many apprentices are brought up in the "good old way" of mixing and tailing varnish, soft soap, and hair oil, are fit for the occupation of their term of apprenticeship to take up as dispenser? In the eye of the law, a chemist is qualified to compound medicines, not one of those who keep a general druggery and oil shop. And I find that if our business is to be rescued from its present unprofitable condition, it will be done by those gentlemen who will elevate it to such a state that the general public will recognise the difference, the "great gulf," between a chemist's and a grocer's shop, and not by those who degrade the chemist to the level of hucksters.

I enclose my name and address, and subscribe myself,
Weston-super-Mare, April 24. BLAUFORD.

SIR,—I have followed up what has appeared on this subject, and heartily confirm the opinions of many chemists who are opposed to it. Chemists are already handicapped with pharmacy laws, whilst grocers and others who retail drugs and chemicals are practically exempt. What benefits do these Acts confer upon us, or the public? Are they not

intended for the protection of the public? Admitting that they are of standard quality, and by persons having a competent knowledge of the purity of what they sell (for this is the intention and spirit of the Act), why, I ask, should any persons sell dangerous drugs, unless they have a competent knowledge of them? Why should one man who sells ordinary drugs be required by law to pass examinations showing his competent knowledge of the same, while other persons may sell the same without any knowledge of them?

What then is the use of examinations? Are they to be evidence of a competent knowledge of poisons? Yes. Then why extend the examination to anything else, unless it is extended to all who deal in what we deal in? The question resolves itself into this—To be a chemist, which really means to have the privilege (!) of selling poisons—it is necessary to pass severe examinations; and how much a year does the chemist make for his trouble? Probably the average chemist does not make 10*l.* a year from his poisons, and it is unnecessary to pass any examination to sell everything but poisons.

The cure is not worth the candle. I am of opinion that this intended new law has been hatched at Bloomsbury, and not by the public. The latter are wide awake, and we need no uneasy until we hear their voice. The proposed curriculum is not needed. We can offer high testimony against it and I am convinced, as many others are, that the examinations are sufficiently stringent.

The branch-shop clause is no doubt well intended by its framers at what is to become of a number of good men, well qualified by experience? Are they to be cast aside? Many are married, and have families dependent upon them; and I certainly think those who can show about a dozen years' experience are entitled to consideration. The Act is, for the public, as faulty as the one of 1868, or even more so, as it does not include doctors' shops and surgeries, where the dispensing of medicines is conducted principally by doctors' wives, daughters, or servants. Nor is the word "person" defined, as applied to ownership. If the Pharmaceutical Society will aim at obtaining some Act which is worth anything to chemists, they will get very strong support from us; and I hope the good suggestions given by several writers to petition their respective M.P.'s to vote against it may be acted upon.

Yours faithfully,

Sower Bridge,
Yorkshire.

M. F. WALTON.
Pharmaceutical Chemist.

An *Old Subscriber* (Bradford) says:—"It is quite charming to read your pale-faced (*sic*) advocacy of the Curriculum Bill, so different from your past professions. It is not difficult to account for the changes of front you have taken up. No one's idea in this part of the country is that the trade is sufficiently handicapped by legislation, and it would be more beneficial to it and the public if some legislative energy were directed against the stores and such-like popular establishments. My own opinion is the Bill is a sham, a delusion and a snare."

[We are not conscious of any change of front in regard to the Curriculum. We have always said it was not worth going to Parliament for that alone, but that if it should be obtained such effect as it would have would be advantageous rather than otherwise to chemists. What we do advocate, however, is the new branch shop clause, and it is this, we presume, which is the trouble with our amiable correspondent. The clause, in our opinion, tends to make the Pharmacopoeia a reality, and would be simple justice to qualified men, and would provide the protection for the public which the legislature intended. That is what our "pale-faced" advocacy amounts to. But our "Old Subscriber" will be good enough to bear in mind that we have given the interested in opposing the Bill every chance to state the case.]

Qualifying *Subscriber in Business* (41/74) also writes to declare himself "dead against the Bill," and he adds:—"I have seen nothing in print to alter my convictions. I consider it most unjust shame to propose to transfer to the ranks of the unemployed competent branch managers, who are giving their qualified employers and the public every satisfaction. It seems absurd for anyone to say these men

are occupying unfair positions in acting as managing assistants to qualified employers; and my experience of twenty years is that they command considerably higher wages than qualified men with little practical experience; therefore the charge against them and their employers on this score is alike unfounded. The tendency of the age is to do more business at less profit than of old."

The American Aloe.

SIR,—On page 512 of your paper of to-day appears a notice of a flowering aloe at Glasgow, and the writer refers to "the popular belief that the plant flowers but once in a century." I often see similar statements; but surely your readers know it is but a play on words? The aloe should more truly be said to flower but once, for the flower and plant fade together. In this sense the aloe may be said to flower but once in a century, though, unless climatic or other influences are adverse, the flowering takes place long before the plant reaches its centennial year. Is there one well-authenticated case of an aloe arriving at such a great age? Some magnificent specimens of aloe are to be seen at Tresco Island (in the Seilly group). Your readers would find no pleasanter holiday place than this. St. Mary's is the island to make one's headquarters at; and the head-gardener of Tresco is a particularly well-informed and courteous botanist, having under his care numerous rare and foreign shrubs and trees, which he is only too pleased to show to visitors.

If the growing bud be cut off, several gallons of liquid collect in the eup formed by the leaves of the aloe, and from this liquor the Mexicans make an intoxicating drink of great strength.

Bristol, April 21.

W. A. LEONARD.

MISCELLANEOUS INQUIRIES.

*A large number of correspondents ask us for formulæ which have already been published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4*l.* each.*

Starch Gloss.—A number of formulæ will be found on page 233 of our issue of August 20, 1887. (40/49. *T. H.*)

Essence of Coffee.—November 5, 1887, page 594. (43/44. *Company.*)

Florida Water.—See our issue of August 28, 1886, page 239.

34/46. *J. T. S.*—An authority on the subject states that the best way to deodorise Mineral Oils is to blow dry steam through them in a closed vessel. If done in quantities of 1,000 gallons and upwards, the steam should be passed for at least twenty-four hours. If the oil be darkened by steaming, it will be restored to brightness by washing first with sulphuric acid and afterwards with caustic potash. Information regarding processes for treating oils is considered so valuable as to justify a patent, consequently other published information may not be altogether practicable.

Tincture of Myrrh and Borax.—*J. E. Ryder* writes:—"Having occasion to make this preparation, I referred to the formula given by Mr. Ince in your issue of February 4, 1888, to see if that was any improvement on the various ones I have, but was somewhat surprised to find the small proportions ordered of tincture of rhatany and eau de cologne, viz., one ounce of the former and a pint of the latter to over two gallons, and should imagine there must be some error." [The formula is quite correct. Many pharmacists do not add rhatany to the tincture at all, and eau de cologne seldom exceeds an ounce to the pint.]

35/37. *D. T. E.*—You will find the formula for **Himrod's Asthma Cure** in our issue of September 3, 1887, page 304. (2) Opinions differ as to the best method of **Destroying Green Fly** in conservatories. A weak solution of nicotine is undoubtedly the most effective application, and next to that we may put an insecticide composed of carbolic acid, eucalyptus oil, methylated spirit, soft soap, and water. Either of these preparations is to be applied with a syringe.

24/31. *May.*—German Yeast is a mixture of yeast cells and farina. The yeast is grown in an amylaceous mixture, made of potatoes or cereals, collected as it rises to the surface, mixed with farina, and superfluous moisture carefully pressed out. There is no reason why yeast should not be made as cheaply in this country as in Germany and Holland; in fact, we know that this is done under Squire's patents, the workers of which turn out hundredweights of pure yeast weekly.

41/18. *Subscriber* (Old Kent Road).—The simplest test for milk is the lactometer, a graduated vessel which indicates roughly the percentage of cream which rises to the surface.

Correction.—Mr. C. Shapley writes:—"On page 535 (last issue), line 3, for "nitrous acid" read "nitric acid," and on line 5 for "strong nitric acid" read "strong nitrous acid."

24/32. *Alpha.*—The Colour of Euonymin.—It is very difficult to say what is the correct colour of euonymin until we have found out what euonymin exactly is. The preparation which Professor Rutherford is said to have used was green in colour, and according to Mr. John Moss the green euonymin is made from young wahoo bark, and the brown from the old bark, which contains little or no chlorophyll. The Curator of the Pharmaceutical Society stated at the last evening meeting that it is erroneous to suppose that stem bark yields green and root bark brown euonymin. We know that well-known makers in this country have utterly failed to make green euonymin from either young or old wahoo bark. It should be noted that there are two plants which go by the name of wahoo, viz., *Euonymus atropurpureus* and *E. americanus*. It was from the bark of the latter that a pharmaceutical institute of New York prepared the original "euonymine," which was reputed to be the active principle, and to be alterative, tonic, laxative, and expectorant. We have been unable to ascertain the colour of this preparation, an eclectic remedy; perhaps some of our United States subscribers can throw light upon the matter. Martindale states that euonymin is "the powdered extractive, of a dark olive-brown colour generally, obtained from the bark of the root of the wahoo or spindle-tree—*Euonymus atropurpureus*." The United States Pharmacopœia does not specify the root-bark, but the eclectic school used that bark. Neither, however, as they come into the market, contains an appreciable amount of chlorophyll, and it is difficult to conceive how the nondescript extractive "euonymin" can have anything else than an olive-brown colour, unless some green colouring matter has been added to it.

36/25. *Monte Video.*—Skins for rugs are preserved by the process of tawing, that is, treating them with alum and common salt.

43/27. *X. J. Z.*—Liquor Strychninæ Hydrochloratis of the present Pharmacopœia deposits crystals of strychnine hydrochlorate because of the amount of alcohol in the solution, the alkaloidal salt being less soluble in alcohol than in water. It is advisable to use from 15 to 20 minims less rectified spirit per ounce than the Pharmacopœia directs.

Books.

43/45. *Fiz.*—If you refer to our issue of April 14, you will find on the third advertisement page notice of a book on

aërated waters, cordials, &c., by Stevenson and Howell, which we can recommend to beginners. Barnett & Foster's well-known instruction.

42/46. *Arbeitsam.*—A book which will suit you. E. T. Kensington's "Chemical Composition of Foods, Waters, Soils, Minerals, Manures, &c." (Churchill, 5s.).

38/26. *Indagator.*—"Handbook of the Telegraph: Guide to Candidates for Employment in the Telegraph Service," by R. Bond (Crosby Lockwood, 3s.).

36/31. *J. A. F.*—We do not know any book on repairing articulated skeletons.

193/32. *Smilar.*—Ghatti gum arabic makes a mucilage which is possessed of full adhesive power, and much cheaper than the so-called Turkey gum. The addition of 4 drops of nitric acid to the ounce of dextrin mucilage is said to render it more adhesive. Sugar possesses the same property.

40/73. *Enquirer.*—Paraffin Stains are difficult to remove from tile floors. Sprinkle the spots with fuller's earth, and place over it a shovelful of live coals, the heat of which induces the evaporation of the paraffin, and the fuller's earth helps to retain the vaporised oil.

Jacob Bell Scholarships.—We have questions in this subject from *Sigma* (41/51) and *Apprentice* (41/4)—(the latter erroneously says *St. Jacob*). These scholarships are of the annual value of 30%, exclusive of free education in the School of Pharmacy, Bloomsbury Square. They are open only to apprentices of the Pharmaceutical Society; two are granted annually, and they are tenable for one year. The subjects of examination are:—Latin—Virgil; the first three books of the *Æneid*; Latin prescriptions; translations of Latin into English and English into Latin; translations from any Latin pharmacopœia, and parsing. French or German. English—Composition and parsing. Arithmetic.—The first four simple and compound rules, fractions, and decimals; the British and metrical systems of weights and measures. Elementary chemistry, pharmacy, and botany. The questions set are published in the calendar of the Pharmaceutical Society. The passages in French and German are generally of an easy character, and such as are to be found in ordinary school books. The Pharmacopœia is the best text-book for pharmacy, Miller's or Wilson's "Chemistry" suits well for the chemistry, and Balfour's "Elementary Botany" for that subject.

40/52. *Leo.*—Acetum Staphisagriæ is made by digesting 1 oz. of the bruised seeds in 5 oz. of acetic acid for seven days and filtering, making up to 5 oz. with acetic acid. This is a suitable vinegar for making lotions. (2) Amyrin is extremely soluble in cold water (less than its own weight), whereas antifebrin is feebly soluble (about 1 in 190).

38/4. *J. M.*—We thank you for your suggestion.

Mr. G. Milligan (Oxford) writes:—"Goose Grease is usually sold at 2d. an oz. here. It is bought in the market, and melted and strained to purify it.

"Is there any truth in the saying that a loaf of bread which has been hollowed out and had some quicksilver in it will stop when it comes to a dead body if it is allowed to float down a stream?"

42/53. *Chinaman.*—Your query has no connection with pharmacy.

40/29. *J. E. G.*—Let us know what formulae you have used for infants' perservative, and what you would like to have.

38. *Linctus* sends a sample of the Worm Syrup for which a formula was given a few weeks ago. It contains a deposit of sugar, which may be prevented by using as syrup a mixture of syrup, 3 parts; water, 1 part.

46. *Enquirer* (Birmingham).—Surfeit water is *Liquor Anonæ Acetatis*.

45. *S. & S.*—Finishing Microscopic Objects.—The round discs are coated with the circular lines of various colored varnishes by means of a camels'-hair pencil, the disc being placed on a turn-table and revolved while the brush is gently applied. The white varnish used is a mixture of red-drying varnish with flake white.

31. *T. E. H.* (Kilburn).—Cherry Brandy.—Brandy and rushed Morello cherries, of each 1 gallon. Macerate for three days, press, and add 1 quart of raspberry juice, $\frac{1}{2}$ pt of orange-flower water, and 2 lbs. of loaf sugar. Shake occasionally to dissolve the sugar, and after standing for week, decant.

30. *C. W.*—Your only chance of getting an engagement as dispenser on board a ship is to get the appointment through the surgeon of such a vessel, to whose discretion it is left to be left.

36. *One Who Wishes to Know* "the true source of *Extractum Aloës Glaciale*" is informed that the name "*Ceyn*" is generally placed after it, thereby indicating the source.

34. *Attraction*.—Cold cream with a tenth of its weight of lactic acid is more likely than bicarbonate of soda to relieve the irritation caused by the hair-dye.

40. *Johannes*.—The Pharmacopœia does not direct decocted liquorice to be used for the official preparations, but common consent the powder of the decocted root is used in making compound liquorice powder. Strictly speaking this is incorrect.

392. *Tulip*.—*Tinctura Rhei Vinosa*, Ph. G.:—

Rhubarb	8 parts
Orange peel, dried	2 "
Cardamoms	1 "
Sherry	100 "

Macerate for seven days, filter, and in the filtrate dissolve seven parts of sugar.

"*Tulip*" wishes a formula for the sweet gripe syrup or water which is much used in Nottingham and district. Can any one furnish the formula?

40. *Santal. Flav.*—The dose of the liq. santal. flav. is a spoonful. Physicians now consider that the administration of this and similar remedies in recent cases is objectionable. In long-standing cases the liquor is specially valuable. The addition of either opium or henbane must depend upon the symptoms.

30. *Salix Nigra*.—We are not aware of any published formula for *Extractum Salicis Nigræ Fluidum*. It may be made with a menstruum of glycerine, 1 part; rectified spirit, 3 parts; and water, 6 parts. For a pint of the extract take 20 oz of the drug in coarse powder, and moisten with a mixture of the glycerine, 2 oz.; spirit, 6 oz.; and water, 8 oz. Allow to stand for a few hours, then pack in a percolator, pour on the rest of the menstruum, and after a day percolate, continuing the percolation with water until 16 oz. of percolate are obtained. Set this aside, and pass other 12 oz of water through the percolator. Collect the percolate, evaporate to 4 oz., dissolve in the reserved portion, and filter.

38/55. *Subscriber*.—The Violin Varnish which you send appears to be a mixture of ordinary oak varnish with a small percentage of fixed oil. The latter is probably Chinese wood oil (obtained from the seed of *Aleurites cordata*) which has been said to be an ingredient of the varnish used for the celebrated Cremona violins. Your varnish evidently contains oil of lavender (exotic). Try the following formula:—

	oz.
Resin	4
Barbadoes aloes	$\frac{1}{2}$
Oil of lavender	1
Turpentine	14
Wood oil (or linseed oil)	1

Macerate until dissolved, and strain.

39/28. *Miller*.—You will find the formula for Marking Ink in our issue of May 7, 1887, page 572.

38/49. *Sheffield*.—The subject is one upon which we cannot advise you.

36/19. *J. J. Frowde*.—Dammar is undoubtedly soluble in ordinary benzol, and if your resin is not it is probably not dammar at all. Dr. Klein has given the following formula for the varnish:—

(1)		oz.
Dammar	$\frac{1}{2}$	
Oil of turpentine	1	

Dissolve and filter.

(2)		$\frac{1}{2}$
Mastic	2	
Chloroform		

Dissolve and filter.

Add No. 2 to No. 1.

Another formula given by a pharmaceutical microscopist is:—Dammar and mastic, of each, $\frac{1}{2}$ oz.; benzole, 2 oz., or q. s. Dissolve.

35/38. *Rheum*.—(1) We do not have a working formula for *Syrupus Quininae Hydriodatis*, nor do we think that one has been published. There are two hydriodates, one acid and the other normal. The simplest way of preparing the former is to dissolve quinine hydrate in hydriodic acid, and make the resulting solution into a syrup with sugar. The strength is said to be 1 grain in a drachm, but the difficulty is to get that quantity in. (2) To fix American cloth to your window enclosure, use a solution of 1 oz. of shellac in 1 oz. of spirit, applied warm.

39/31. *Missions*.—Ointments to be sent to warm climates should not become liquid below 110° F. The following proportions should be suitable for your ointment:—Resin, 12 oz.; yellow wax, 14 oz.; white wax, 6 oz.; spermaceti, 12 oz.; olive oil, 3 lbs.

39/50. *Veritas*.—We do not know the composition of Brahee sugar.

39/58. *Eos*.—Essence of Anchovies.—Anchovies, 1 lb.; flour and salt, of each 2 $\frac{1}{2}$ oz.; water, a pint. Bone the anchovies, reduce to a pulp, and pass through a sieve. Boil the bones and other unsifted material with the water for fifteen minutes, strain, add the salt, flour, and sifted pulp, and again boil for a few minutes. Then add half a pint of pickled vinegar and bottle.

40/46. *Chemicus*.—A chemist and druggist holding the Minor certificate of Great Britain may therewith get on the register in any of the Australasian colonies. Without that he must acquire a similar qualification by examination before one of the colonial boards.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Dispensers who have compounded any of the following prescriptions, or similar ones, are requested to communicate their results to the Editor.

41/70. *Sal Tartaros*.—Please send the proportions of the ingredients of the mixture.

Pill Ideas.

SIR,—For fifteen years there has been quoted in Maw's list, under the head of "pill-finishers," a brass burnisher, reversible, and suitable for rounding pills; 7 inches diameter; 6s. each; worked with a strap; which must be the thing several have written about lately. Yours, &c.,

FIDES. (207/9)

Copaiba Emulsion.

SIR,—How may the following be dispensed, so that the mixture will not separate? Ought mucilage to be added?—

Potass. nitrat.	..	..	..	..	3ij.
Liquor. potasse	..	..	..	..	3ij.
Bals. copaiba	..	..	..	..	3j.
Tinct. hyoseyam.	..	..	..	..	3iv.
Spirit. chloroform.	..	..	..	..	3ij.
Aque ad	..	..	..	..	3vj.

Yours truly,
M. N. (42/41.)

[It is not necessary to add mucilage, nor would the procedure be justifiable. Mix the potash solution with 1 oz. of water and shake the copaiba well up with the mixture. Mix the remainder of the ingredients, and add gradually and with constant shaking to the emulsion.]

Unmanageable Suppositories.

SIR,—What is the best way of making the following suppository?—

Iodoform.	..	..	..	..	gr. iij.
Ac. tannic.	..	..	..	..	" iij.
Ol. eucalypti	..	..	..	..	mij.
Ergotinae	..	..	..	..	gr. iij.
Ol. theobrom.	..	..	..	..	qs.
Ft. suppositorium.					

Liverpool, April 22.

Yours, &c.,
J. BIRDSALL.

Camphor Pills.

SIR,—Will you kindly inform me, through your valuable journal, *THE CHEMIST AND DRUGGIST*, what excipient should be used with the following?—

Camphor.	..	..	..	..	gr. j.
Ext. belladon.	..	..	..	..	" i
" hyoseyam.	..	..	..	..	" 1
Fiat pil.; mitte xxiv.					

I used S.V.R. and ol. ricini, but not to my favour, nor that of the pills.

Yours truly,
H. J. (43/34.)

[Powder the camphor by aid of a little water and curd soap, rub down the extracts carefully with it, and mass with glycerine of tragacanth.]

An Explosive Mixture.

SIR,—The following prescription has been dispensed several times, and it has burst the bottle. Can you explain the decomposition which takes place?—

Potass. iodid.	..	..	..	..	3j.
Liq. hydrarg. perchlor.	..	..	..	..	3j.
Sp. ammon. arom.	..	..	..	..	3ij.
Aq. menth. pip. ad	..	..	..	..	3viij.

M.

Yours, &c.,
SACCHARINE. (43/15.)

LEGAL QUERIES.

41/18. *Alpha*.—If your unqualified friend "as an apothecary," or calls himself by any protected title dispenses or sells poisons, he can be proceeded against under the Apothecaries, Medical, or Pharmacy Acts. But what you tell us about his proceedings is far too vague to enable us to form an opinion.

206/28. *E. B. C.*—The Pharmaceutical Council considered that the Pharmacy Act, 1852, gave to pharmaceutical chemists the exclusive right to use the title "the pharmacist," as applied to a shop. They have never pressed the claim, nor have they, as far as we know, ever formally abandoned it. We do not think they could establish it.

42/18. *Rhei*.—Yes. "B & Co. (Limited)" may call themselves "chemists and druggists," even though neither B nor any other shareholder is qualified or registered. But B or any other unregistered person should sell a scheduled poison, he is personally liable to a penalty under the 17th section.

42/59. *Ajax*.—The Pharmaceutical Council do not interfere with the bona-fide use of the title "analytical chemist." But they have the power to do so, and they certainly would not allow an unqualified person to open an ordinary drug shop and describe himself as "analytical chemist."

43/19. *An Old Subscriber*.—We should consider that the addition of the trade-mark to your label would certainly render your preparation liable to medicine-stamp duty. As the label now stands it is about an even chance whether the Board would declare it liable or not, but we should expect the latter.

43/73. *Minor*.—We do not know whether anyone claims the exclusive right to the title "Soap Bark Dentifrice." You can ascertain at the Trade-Marks Office on payment of 1s. We should suppose it would not be a registrable title. It was decided on appeal at the Cambridge Quarter Sessions on January 9, 1880, that the use of alum in baking-powder was not an adulteration.

43/38. *C. C.*—We do not know why the Board of Inland Revenue regard your "Infants' Preservative" as liable. We should not have thought that the label you send renders it liable. Your "Children's Cough Mixture" is liable because you say "prepared only by C. C.," which indicates a claim of proprietary right.

44/24. *Magnes. Sulph.* also sends us a label, headed "Infants' Preservative," which has been declared by the Inland Revenue to render the preparation liable. On the label appeared certain testimonials which would probably themselves involve liability, but the following extract from your letter seems to indicate that the Board regard the title itself as sufficient:—"In reply to your letter, dated 10th inst. respecting 'Infants' Preservative,' I am directed by the Board of Inland Revenue to acquaint you that the preparation in question is liable to stamp duty in consequence of the name given to it, which indicates that it is a specific, to which description of medicine the duty expressly attaches, as you will observe on perusal of the annexed extract of the label on the subject."

Information Wanted.

[Replies to the following requests are solicited by correspondents of *THE CHEMIST AND DRUGGIST*.]

28/67. How may capers be best kept in bulk about 2-cwt. quantities?

42/62. *Enitar* would be glad to know the composition of Dreesches Eisen.

36/37. What is the best preparation for marking sheep, other than the old-fashioned melted pitch?

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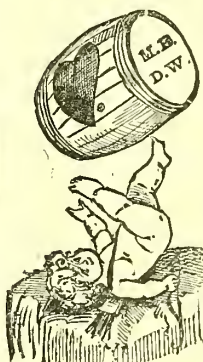
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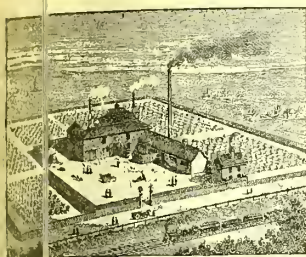
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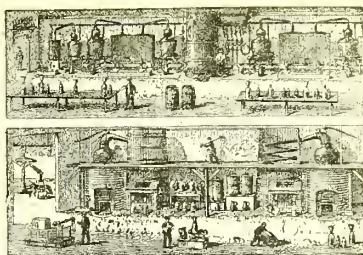
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46..Alcool de Menthe Ricqles	41/5	4/6..Capsules Matieo	36/	2/3..Guyot's Goudrou	18/	7/0..Rabuteau's Elixir Ferrug	65/
29 Di ditto	21/8	4/6.. " Raquin	36/	11/..Laville's Gout Tincture	91/10	2/9.. " Sirop	24/4
29..Anber's Syrup	26/3	4/6.. " Mathey Caylus	27/	11/.. " Pills	91/10	4/0..Racahout	31/
29.. " Pâte	15/4	4/6..Chassaing's Wine	38/9	2/3..Papier Payard	13/6	4/6..Reynal's Bougies	37/10
66..Baym	57/	2/9.. " Pills	24/4	1/1 1/2 Ditto	7/3	2/9..Ricord's Injection	24/4
58..Di	31/	4/6..Clin's Bromide Cam. Dragées	45/	4/..Papier Fruneau	24/4	4/6.. " Capsules	36/
27..Belk Charcoal	15/4	5/..Eau Botot (Genuine)	40/1	2/3.. Ditto	14/5	9/.. " Syrup	90/; 4/6; 42/
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26.. " Ditto	18/	6/..Elixir de Coca	56/9	2/9.. " de Coca	24/4	1/9.. " Ditto	14/5
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2/.. " to	16/3	2/3..Granules Arsen. Acid	13/6	1/6.. " de Nafé	13/6	2/9..Vichot's Trochisques	21/8
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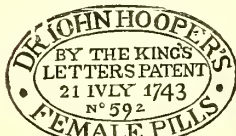
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"Mr. Benger's admirable Preparations."—LANCET.

LIQUOR PANCREATICUS (BENGER).

For preparing peptonised or partially digested milk, soups, &c. Bottles, 2/6, 3/, and 8/6, with full directions.

BENGER'S PEPTONISING POWDERS.

Colorless, odourless, and soluble. One will peptonise a pint of milk, &c. 10 to 15 minutes. Boxes of 12 powders, 2/6.

LIQUOR PEPTICUS (BENGER).

An exceedingly active fluid pepsin. Dose, one to two teaspoonfuls with meals. Bottles, 3/, 5/6, and 10/6.

BENGER'S PEPTONISED BEEF JELLY.

A delicious quick restorative; will keep in any climate. Tins, 2/ each.

MOTT'S HEAD & CO. (S. PAINE & F. B. BENGER), PHARMACEUTICAL CHEMISTS, MANCHESTER.

BENGER'S PEPTONISED CHICKEN JELLY.

A nutritive delicacy for Invalids. Tins, 2/ each.

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For Infants, Children, and Invalids. This delicious and highly nutritive food is distinguished from others by the ease with which it can be digested and absorbed. Tins, 1/6, 2/6, 5/, and 10/.

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For making pure whey, junkets, &c. Bottles, 1/ each.

BENGER'S PREPARATIONS are obtainable through all leading Wholesale Houses or of the Manufacturers,

KERFOOT'S SUGAR-COATED PILLS.

HAVING perfected the manufacture of SUGAR-COATED PILLS, and believing them to be greatly superior to Pearl-Coated Pills, I shall in future keep in stock and supply SUGAR-COATED PILLS only.

It is not too much to say that SUGAR-COATED PILLS prepared by my new process are simply the perfection of Coated Pills. It is well known that a large Sugar-Coated Pill is more easily swallowed than a much smaller Pill uncoated, or even Pearl Coated. A properly-prepared Sugar-Coated Pill, moreover, is attractive to the eye, while it conveys only the most pleasant sensations to the palate. It is the quick solubility of the coating of these Pills which causes them to be so easily swallowed, and it is to their rapid solution in either warm or cold fluids that their great superiority is due; for a Pill, however well or attractively coated, fails in activity if it is not capable of being rapidly disintegrated when immersed in a warm fluid.

KERFOOT'S SUGAR-COATED PILLS are coated *without the application of any heat*, and have no resinous varnish to impede their solubility; they disintegrate with the utmost rapidity, even in cold water; their speedy solution in the warm fluids of the stomach, and consequent activity, are therefore assured.

All the Pills of the British Pharmacopœia and a variety of others are constantly in stock.

In addition to the ordinary Pills familiar to all Pharmacies, I have in course of preparation a new list of minute Pills, composed of very active ingredients, each finished Pill weighing one or two grains only, to which the title GRANULES has been given.

Chemists' private forms will be prepared with the utmost accuracy, and at a reasonable charge.

In a few days my new list of SUGAR-COATED PILLS and GRANULES will be ready, and I shall be pleased to forward it to any of my customers post free on application.

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MANUFACTURING PHARMACEUTICAL CHEMIST,
Medlock Vale Works,
LONDON ROAD, MANCHESTER.

W. F. SMITH'S TASTELESS DANDELION ANTIBILIOUS PILLS,

Price, 1s. 1½d. and 2s. 9d. per Box.

[Registered.] TARAX. AND PODOPH. [Registered.]
A NON-MERCURIAL LIVER MEDICINE, specially useful
to the habitually constipated, and safe for all ages.
Worthy of trade notice. Reliable, and rapidly increasing in
public acceptance.
Urgent caution needed against injurious imitations.

PREPARED ONLY BY

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To be had of the usual Houses at Home and Abroad.

METHYLENE.

Obtained by the action of Metallic Zinc on
Chloroform and Alcohol.

Discovered to be a general Anæsthetic by Dr. RICHARDS
in 1867.

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COMPOUND ANÆSTHETIC ETHYL.
For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 6s.

OZONIC ETHER.

In 2-oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s. and 11s.

PEROXIDE OF HYDROGEN.

First introduced as a medicine by Dr. RICHARDS

ETHYLATE OF SODIUM

(Dr. RICHARDSON'S Formula), for removing Nævi, &c. In 1-oz. and 1-6

Bottles, with elongated Stoppers for applying the Caustic, 2s. and 4s.

STYPTIC COLLOID,

or promoting the Healing of Wounds by the first intent

In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d.

and 4s. 6d.; 16-oz., 12s.

CHARCOAL CAPSULES,

Containing Pure Vegetable Ivory

Charcoal.

In Boxes, 2s. 6d. each.

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THE ONLY ABSOLUTELY
SAFE AND CERTAIN
CURE FOR

SLEEPLESSNESS NERVOUS DISEASES INDIGESTION AND SPASMS.

contain no Opium, Morphia,
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Narcotics; they do not
disturb the
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Attention is called to the following articles:—

MEDICINAL CAPSULES.

Peruvian Mixture Capsules.....	8/ & 2/
Matico Oil and Copaiba do.....	2/6
Santal Oil do. (36 in each box).....	4/
Cubeb Oil and Copaiba do.....	2/6
Copaiba, Cubeb Oil, and Santal Oil do.....	8/6
Copaiba Capsules, No. 0.....	1/6
" " No. 1.....	1/3
" " No. 2.....	1/4
Copaiba, Alum and Cubeb.....	1/8
Compound Ferruginous.....	8/6
Male Fern Oil.....	1/6
Cod Liver Oil.....	1/8
Castor Oil.....	2/6
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ALL DRUGS WARRANTED TO BE GENUINE.

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Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberate untruth as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

THE VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used another, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant published his said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the Inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London	Frazer & Green,	Glasgow	Morson, T., & Son,	London
Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newbery & Sons,	London
Baiss Brothers,	"	Giles & Son,	Clifton	Oldham, G., & Co.,	Dublin
Banks & Richards,	Birmingham	Goulding, Messrs.	Cork	Parsons & Richardson	Leicester
Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raines & Co.,	York
Bourne & Taylor,	"	Grindley & Son,	Chester	Raines & Co.,	Edinburgh
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Sang & Barker,	"
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sanger, J., & Sons,	London
Curling & Co.,	"	Hopkins & Williams,	"	Sim, James, & Co.,	Aberdeen
Curtis & Co.,	"	Hovenden, R., & Sons,	"	Smeeton, W.,	Leeds
Davy, M'Murdo & Co.,	"	Hunt & Co.,	Exeter	Sonthall & Co.,	Birmingham
Dobbin, W., & Co., Limited	Belfast	Hunt, A., & Co.,	"	Sutton, W., & Co.,	London
Drew, Barron & Co.,	London	Johnson, J. H. & S.,	Liverpool	Tomlinson, Hayward & Co.,	Lincoln
Drew, B., & Alexander,	"	Langton, W., & Co.,	London	Treacher, Hodgkinson & Co.,	"
Dunn & Company,	"	Lynch & Co.,	"	Westrup, J. B.,	Kensington
Edwards, W.,	"	Mander, Weaver,	Wolverhampton	Westwood & Hopkins,	Lincoln
Evans, Gadd & Co.,	Exeter	Marsden & Sons,	London	Woolley, James,	Manchester
Evans, Leecher & Webb,	London	Maw & Son,	"	Wyleys & Brown,	Coventry
Ferris & Co.,	Bristol	Meggison & Co.,	"	Xates & Co.,	London
Foulger, S., & Son,	London	Mackay, John, & Co.,	Edinburgh		



After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

Sold in Bottles—1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Usual Discount to the Profession.

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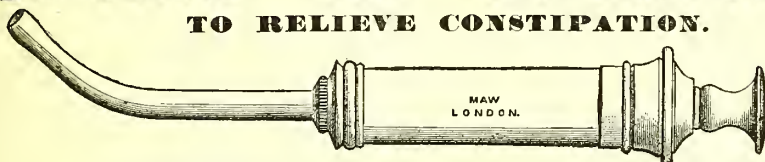
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 AYRTON & SAUNDERS will be glad to undertake Foreign Agencies and Commissions, and to buy and ship for Firms who have no representatives in England, and as they keep themselves thoroughly abreast of the times their friends can rely upon being well posted up in all the Novelties and Specialities that are being constantly introduced.

IMPROVED SYRINGES

FOR THE
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TO RELIEVE CONSTIPATION.



PRICES TO THE TRADE—

PEWTER, 8/ per dozen; PEWTER, with Glass Barrel, 12/ per dozen; VULCANITE, 30/ per dozen;
VULCANITE, with Glass Barrel, 30/ per doz.; CELLULOID, with Glass Barrel, 45/ per doz.

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A. HUTCHINSON & CO. MANUFACTURERS OF INDIARUBBER GOODS.

SPECIALTIES—The "Zephyr" Pillows and Cushions, in Silk and Fancy Sateen—Sponge Bags, Single and Double Faced Sateen—Pointillé (Reg.) and Star Check—Ice Bags—Rubber Bandages—Nursery Aprons, Coloured Proofings and Fancy Sateens, &c., &c.—Hot-water Bottles, Drab, and the Black Non-absorbent and Antiseptic Bottle—Odourless Bed Sheetings, Rose, Black, and Drab.

SOLE PROPRIETORS and MANUFACTURERS of the BANDAGE "**HEFTBAND**," in all widths for Surgeons' use; and 6d. Metal Boxes for the Retail Trade.

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New Price List on application.

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PORTABLE SAFETY LAMP

As simple as an ordinary Lamp. 2½ hours' Light from one charge for 5d. Write to the

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CONSTIPATION.

DAIL'S DYSPEPSIA CAKES.

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NATURAL REMEDY FOR INDIGESTION AND CONSTIPATION.
Recommended by several leading Medical Men.

2/6, 1/- BOXES.

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COATED
SPRING BOUGIES.

COATED WITH 2½ per cent. THALLIN SULPHATE.

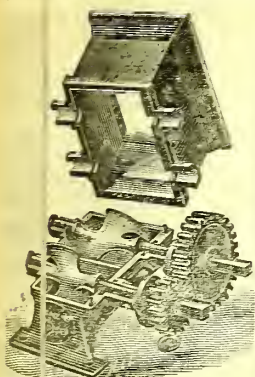
" " COCAINE AND THALLIN SULPHATE.

In the "LANGET," April 14th, 1888, Mr. E. Hurry Fenwick, Surgeon to St. Peter's Hospital for Diseases of the Urinary Organs, states that he has found these Bougies to rapidly cure the worst cases of gleet, some being of seven and fourteen years' standing. See also "LANGET" for March 24th, p. 591, in which Dr. Hugo Lohstein results in gonorrhoea are also given. These Bougies cure in a surprisingly short time, without recourse to internal remedies.

Sold in Boxes with full directions at 2/9, 5/6, & 18/6 per Box.

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THE "UNIVERSAL" KNEADING AND MIXING MACHINE FOR PILL MASS MAKING,

ALSO FOR

Horse Balls, Tooth Pastes, Ointments, Soaps, Powders, and for general Mixing and Incorporating.

REPLACES WITH ADVANTAGE ALL OTHER APPLIANCES FOR THESE PURPOSES.

Made in various sizes, to do from $\frac{1}{2}$ lb. up to 1 ton at a time.

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THE GREAT DIFFICULTY SOLVED!

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*How to Grind Crystals, Sarch, &c.
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How to Mix Many Ingredients in
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a Perfect Blend with great ra-
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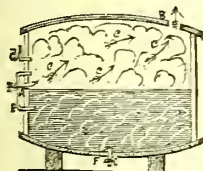
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Trade "DESIDERATUM" Mark.

Mixer and Drug Mill Combined

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SHOWROOMS:—LONDON—100 Houndsditch; MANCHESTER—
24 Corporation Street; WOLVERHAMPTON—2 Cleveland Street.
All communications to WINCANTON.



NEW METHOD OF MAKING VINEGAR, THE REVOLVING APPARATUS (Michaelis' Patent).

For further particulars

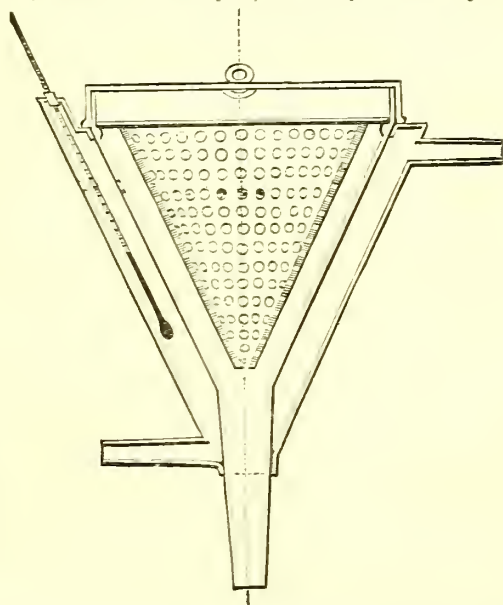
See Chemists' and Druggists' Diary, 1884, page 274,
OR APPLY TO

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105 (late of 27) LEADENHALL ST., LONDON

NICKEL'S PATENT DOUBLE FILTERING FUNNELS

In Porcelain or Metal for rapid filtration, thorough washing of precipitates, analysis, filtration of volatile liquids, without any loss from evaporation.

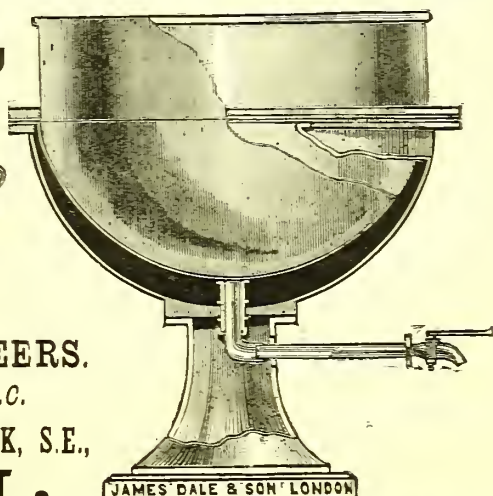
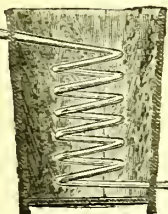
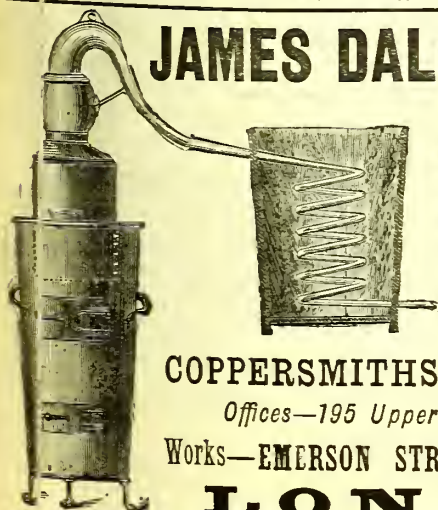


These Funnels are now made jacketed, and with air-tight lids, so that the temperature of the liquid to be filtered can be regulated at between freezing and boiling points without coming into contact with the air.

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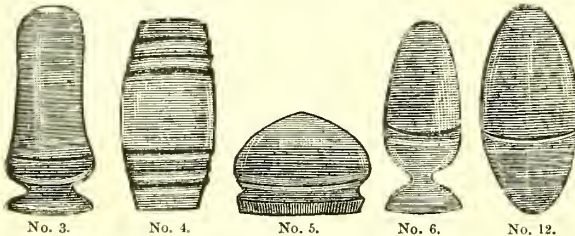


The most Perfect WHITE TOOTH PASTE yet offered. Warranted to remove the acids of the mouth. The most easily prepared filling yet produced, and a boon to the Profession.

Order through the Depots or direct from the Sole Manufacturer.

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Complete with ORNAMENTAL MIXING SLAB, PRICE 5s. SAMPLES FREE.


MENTHOL CONES.

No. 6, Pillar Shape, Polished Whitewood Boxes	...	2/-
" 3, Pedestal " " Boxwood	...	2/6
" 4, Barrel " " "	...	2/6
" 5, Hat " " "	...	3/-
" 12, Egg " " "	...	3/4

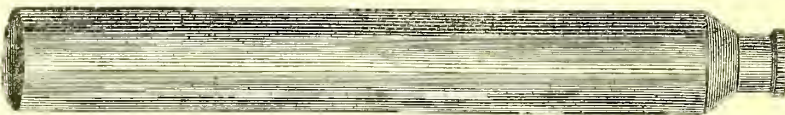
Assorted C parcel (1 Gro.), 1 doz. No. 6, 1 doz. Nos. 3, 4, 5, 12	...	7/6
" D " (1 "), 1 " " 2 " " 1 " " 1 " "	...	1/6

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For Perfumes, Artists' Colours, Soaps, Creams, Oils, Varnishes, &c. The Tubes are inexpensive and portable, and many useful purposes besides the above mentioned.

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With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c. These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.

THE "TORSION" PATENT SPRINKLER

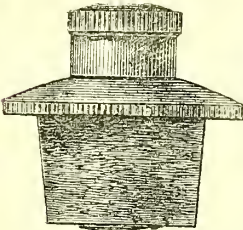
The two designs, Nos. 18A and 19A, are those to which we direct special attention, as sizes being in general use other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste.

Particular attention is called to the latest improvement in our Patent Metallic Stopper, the "Torsion." This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable for Bottles of all Sizes and Shapes," with the additional security it affords, in that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is especially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country. All orders received direct will be promptly attended to.

CAUTION.—All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO. stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 2 1/2.



No. 1

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19A.

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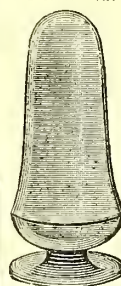


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3	Boxwood Boxes—Screw lid, Pedestal shape ..	6/6	12/3	21/0	
4	Do. do. do. (larger) ..	7/3	13/3	23/0	
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6	Do. do. do. Button shape ..	8/6	16/3	31/0	

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ASSORTED PARCEL No. 1 (1/4-GROSS).

	Costing	Selling at
1 doz. No. 1 at 1/4-gross price ..	1/3	2/0
1 " " 2 " " ..	1/7	3/0
1 " " 3 " " ..	6 1/2	10 1/2
1 " " 4 " " ..	7 1/2	1/0
1 " " 5 " " ..	7 1/2	1/0
1 " " 6 " " ..	8 1/2	1/6
3 doz. costing 5/3, retailing 9/4 ..	5/3 1/2	9/4 1/2

Being a profit of 4/1, namely 77 per cent.

ASSORTED PARCEL No. 2 (1/2-GROSS).

	Costing	Selling at
2 doz. No. 1 at 1/2 gross price ..	2/3	4/0
2 " " 2 " " ..	2/11	6/0
2 " " 3 " " ..	1/0 1/2	1/9
2 " " 4 " " ..	1/1 1/2	2/0
2 " " 5 " " ..	1/1 1/2	2/0
2 " " 6 " " ..	1/4 1/2	3/0
6 doz. costing 9/9, retailing 18/9 ..	9/9	18/9

Being a profit of 9/0, namely 92 per cent.



No. 5. 4d.

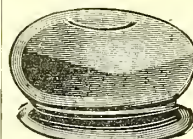
Terms—NET CASH.
Please cross all cheques, and make them payable to the MIKADO MENTHOL COMPANY.
Being in the suburbs of London, labour and rent is cheaper, and the benefit of which we give to our customers

ASSORTED PARCEL No. 3 (1 GROSS).

	Costing	Selling at
3 doz. No. 1 at the rate of 11/6 per gross	2/10 1/2	6/0
3 " " 2 " " ..	3/9	9/0
1 1/2 " " 3 " " ..	2/7 1/2	5/3
1 1/2 " " 4 " " ..	2/10 1/2	6/0
1 1/2 " " 5 " " ..	2/10 1/2	6/0
1 1/2 " " 6 " " ..	3/10 1/2	9/0
12 doz. costing 18 10, retailing 41/3 ..	18/10 1/2	41/3

Being a profit of 22/5, namely 119 per cent.

A sample of each of the six shapes of the "Mikado" cones sent post free for 1/3. Send for this set of samples and judge of the quality & cheapness of our cones.



No. 6. 6d. Retail Price.

THE MIKADO MENTHOL CO., 5 ANSTEV ROAD, PECKHAM RYE, LONDON, S.E.

PRIME MEDAL, International Health Exhibition, 1884.

THE NEW PERMANENT

ENGRAVED WINDOW TABLETS

AWARD OF MERIT, International Sanitary Exhibition, 1881.

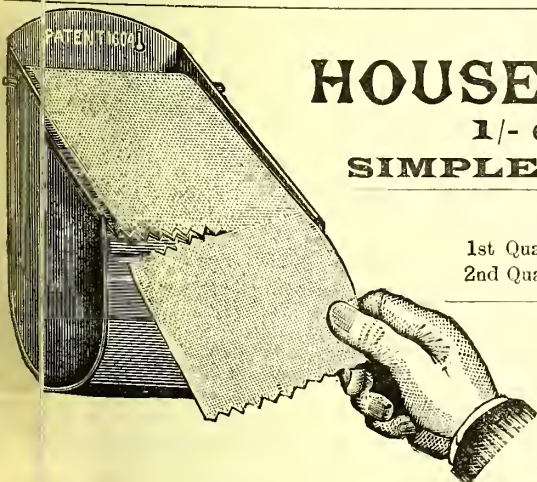
IN RUBY, BLUE, AMBER, AND OPAL GLASS.

Send particulars of size, subject matter, and colour, when price for one Tablet and upwards will be sent.

For Proprietary Articles, 100 8x6 Ruby Tablets, £3 15s. 0d.

J. CORSAN, THE LONDON SAND-BLAST WORKS, 80 GRAY'S INN ROAD, W.C.
TO PREVENT FRAUD, DEMAND BUSINESS CARD FROM TRAVELLERS.

HEAD QUARTERS FOR TOILET FIXTURES.



THE NEW HOUSEHOLD FIXTURE,

1/- each, complete with Roll of Paper.

SIMPLE. EASY. EFFICIENT.

REDUCED PRICE FOR REFILLS.

1st Quality ... 5/6 per dozen, or 63/- per case of 1 gross.
2nd Quality ... 4/6 per dozen, or 100/- per case of 2 gross.

JOHN S. DOWNING

Commercial Street, BIRMINGHAM;

9 ROSE STREET, LONDON, E.C.; 73 VIRGINIA STREET, GLASGOW.

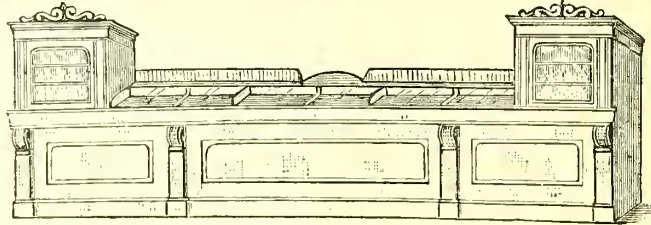
W. S. YATES

(ESTABLISHED 1864),

CHEMISTS' AND GENERAL SHOP FITTER

SHOP FRONT BUILDER AND GLASS SHOWCASE MAKE,
9 CAMDEN STREET, LIVERPOOL.

PLANS & ESTIMATES
supplied for Work
in any part of the
Kingdom.



ALTERATIONS
and REMOVALS
Estimated for.

The following are some of the Chemists' shops fitted by W. S. Y.:-

Mr. AGNEW (2 shops), Great Homer Street, Liverpool.
" WARHURST (4 shops), Stanley Road, Liverpool.
" MARTIN (2 shops), Lime Street, Liverpool.
" HALL, Breckfield Road, Liverpool.
" THOMAS, Lark Lane, Liverpool.
" BLACKBURN (2 shops), Tuebrook, Liverpool.
" BUDDEN (5 shops), Dale Street, Liverpool.
" WOODCOCK, Scotland Road, Liverpool.
" FLETCHER, Breck Road, Liverpool.
" PURCELL, Walton Road, Liverpool.
" EVANS, Elam Bank, Liverpool.
Messrs. KNOWLES & WRIGHT, Castle Street, Liverpool.
Mr. CRAWLEY, Rice Lane, Liverpool.
" CALEY (2 shops), Stanley Road, Liverpool.
" ADAMS, Granby Street, Liverpool.

Mr. CLARKE, Warwick Street, Liverpool.
" JEWELL, London Road, Liverpool.
" BROWN, Stanley Road, Liverpool.
" HUGHES, Mill Street, Liverpool.
" HARRIMAN, Brownlow Hill, Liverpool.
" JOSEPH, Great Homer Street, Liverpool.
" SANT, West Derby Street, Liverpool.
Messrs. J. H. & S. JOHNSON, Church Rd., L'pool.
Mr. JONES, County Road, Liverpool.
" PARRY, Stanley Road, Liverpool.
" EDWARDS, Litherland.
" WRIGHT, Leek.
" THOMAS, Aberystwyth.
" BOWEN, Griceleth.
" R. PHEYSEY, Waterloo.
" T. MARTIN (2 shops), Waterloo.
" EVANS, Millam, Cumberland.

Mr. BREWITT, Sandy, Bedford St.,
" BAKER, Chester.
THE CHEMIST CO., Wem, Sal.
Mr. BENNETT, Widnes.
" ROSE, New Brighton.
" CLEMENTS (2 shops), Egremat.
" LEWIS, Rock Ferry.
" COLE, Cloughton.
" MARSON (drawers only), Stord.
" WOODS (cases and drawers), Harrington.
" RICHARDSON, Fern Grove, Liverpool.
Messrs. WALKER & SON, Myrdal, Liverpool.
Mr. RIGHTON, Southport.
" A. M. SUDLOW, Southport.
" SUART, Penny Street, Lancaster.
" FREECE, Oxtou.
" CHABOT, West Kirby.

SECOND-HAND FIXTURES OCCASIONALLY ON HAND. DENTISTS' CASES &c., &
SHOPS TO LET FOR NEW BUSINESSES.

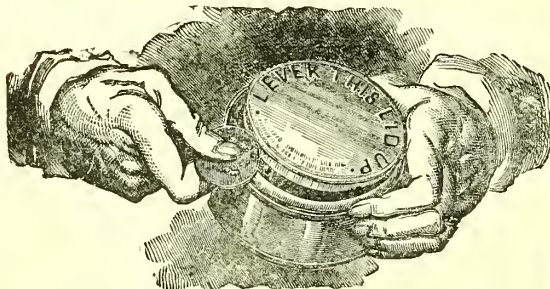
All kinds of Glass Work in Name Plates, Shelves, Outside Lettered Slips, &c.

THE SELF-OPENING TIN BOX COMPANY

(GRIFFIN'S PATENT).

ALBION TIN WORKS, YORK ROAD, KING'S CROSS, LONDON N.

Telegraph Address—"TIN BOX LONDON."



Boxes ready made up, or the Patent Tops only (ready for making up), are supplied.

THE NEW TIN BOXES for all kinds of Hermetically Sealed Preserved Foods, DRUGS and CHEMICALS.

THE NEW TIN BOXES are as cheap as the ordinary Boxes, require no soldering up, and can be opened with a piece.

THE NEW TIN BOXES are the largest Food-preserving Houses and CHEMISTS, to which references can be given.

THE NEW TIN BOXES are also perfect for Paints, Oils, and Coffee Canisters, Biscuit Boxes, Confectionery Varnishes, Soaps, &c.

THE NEW TIN BOXES are described by the Standard, Chronicle, Illustrated News, Engineer, Colourman, and Press generally, as the "neatest and most elegant invention ever made."

CAUTION.

IN THE HIGH COURT OF JUSTICE, CHANCERY DIVISION

GRIFFIN v. NOAKES. 1887. G. No. 1,088.

GRIFFIN v. FRAVER. 1887. G. No. 087.

As we understand from some of our Clients that, from false representations made, an impression prevails that the proceedings in these actions have failed, we beg to inform the public that such is not the fact, and that the proceedings are being carried on as fast as possible, in the Chancery Division of the Court, to restrain the Defendants from selling or making Tins similar to those manufactured by us, and from infringing our Patent. The Defendants, pending the proceedings, have been ordered by the Court to keep an account of all sales made by them. Our Solicitors, Messrs. CLARKSON, GREENWELL & Co., have had instructions from us to proceed against all persons so offending.

FOR THE SELF-OPENING TIN BOX COMPANY, G. FEATHERSTONE GRIFFIN, Manager.

"Attractive, Effective AND Profitable Advertisement."

With all Orders for **£1. 2s. 6d.** net we shall present a **LARGE SHOW CONE**, 18 inches high, made in "TERRA COTTA." This is a very attractive window ornament, and quite novel, the Model representing one of our No. 161 Cones with the lid off, and the Cone showing a splendid white in striking contrast to the red foot.

All our Cones are guaranteed Pure Menthol, and our Prices are the **LOWEST** in the market, if **SIZE** of Cone is taken into consideration. Our Boxes are all branded, and buyers may have their own names on for quantities of five gross free of charge; the Boxes do not then bear **OUR BRAND**.



No. 202.



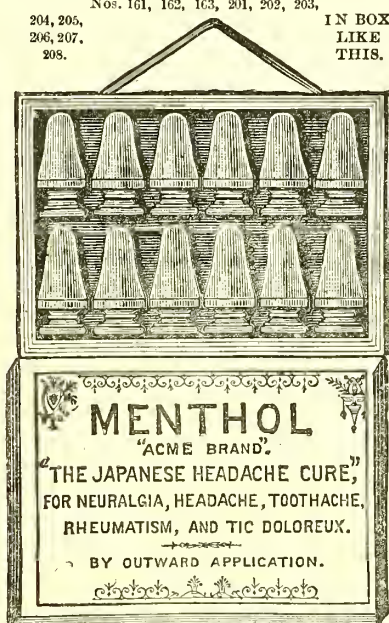
Nos. 203, 205, 206.



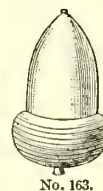
Nos. 55 & 162.

Nos. 161, 162, 163, 201, 202, 203,
204, 205,
206, 207,
208.

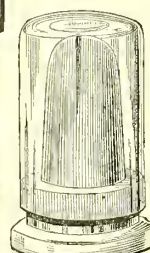
IN BOX
LIKE
THIS.



No. 200.



No. 163.

Nos. 214, 2146,
and 217.

Importers, Exporters,
and the Home Trade,
please keep this page
for reference.



Nos. 89, 90, and 91.

No. 201
and 201B.

No.	Per dozen	Size
88. Hard Wood Boxes, Pedestal Shape	2/6	1/
89. Nickel Screw Capped Bottles	4/6	1/
90. " " " "	3/8	9d.
91. " " " "	2/6	6d.
161. Boxwood Boxes, Acorn Shape	4/2	1/
162. " " " "	3/11	1/
163. Vegetable Ivory, Acorn Shape	5/0	1/
200. Boxwood Boxes, Pedestal	3/0	6d.
201. " " " "	3/11	1/
201B. " " " "	Extra Large	
202. " " " "	Cone	5/10
203. " " " "	Bullet	3/11
204. " " " "	Cone	3/11
204. Vegetable Ivory, Castle Shape	5/10	1/
205. Boxwood Boxes, Cone Shape, each in box	3/3	6d.
206. " " " "	as No. 203, Large Size	4/8
207. " " " "	Draughtsman Shape	4/11

No.	Per dozen	Size
207B. Boxwood Box, Draughtsman Small	2/9	1/
208. Vegetable Ivory	6/6	1/
209. Nickel Plated Pencil, with Menthol at end	4/6	1/
210. Boxwood Boxes, Acorns, Nickel Plated Caps	5/4	1/
211. Vegetable Ivory Boxes	5/10	1/
212. Boxwood Boxes, Bullet Shape, reversible end	4/8	1/
213. Menthol Charms for Watch Chains, &c.	2/8	6d.
214. Glass Show Bottle, with Cone on Stopper	5/10	1/
216. Glass Show Bottle, Giant Size	6/	1/6
216. Boxwood Boxes, Beer Bottle Shape, Large Cone	5/10	1/
217. Glass Show Bottle, as No. 214	3/3	6d.
(The best and largest 6d. Cone made.)		
218. Menthol & Court Plaster in Nickel Cases	5/10	1/

Nos. 161, 210,
and 211.

A Sample Box containing one each of above, 8; by post 9/.

5 per cent discount for
Cash Order.

"ACME BRAND" AND HOCKIN'S.

Special Quotations for
Large Quantities.

MANUFACTURED BY

HOCKIN, WILSON & Co.

8 DUKE STREET, MANCHESTER SQUARE, LONDON, W.

FINEST SUBLIME OLIVE OIL

In 35 to 40 gallon quarter casks, 5 6 per gallon (casks free); ditto in 12-gallon tins, 5/9 per gallon (tins charged and returnable).
TERMS: Quarterly or current journey account, less 2½ per cent., or Cash, less 5 per cent. Cash or two references requested with first order.

OFFERED BY

A. & J. WARREN,

Wholesale and Export Druggists, Licensed
Makers of Methylated Spirit,

23 & 24 REDCLIFF STREET, BRISTOL.

N.B.—The shipments of the above article have hitherto given great satisfaction, it being very different to the so-called Sublime Olive Oil offered by many Oil Houses, while at the same time the high prices often required for Sublime Olive Oil by leading Drug Houses are not demanded.

Messrs. A. & J. WARREN are Proprietors of

WARREN'S REFINED WOOL FAT

A REMEDY FOR SKIN DISEASES.

1s. 9d. per lb. In 4-lb., 7-lb., and 14-lb. tins (tins free). A sample 2-lb. tin delivered free to any town in the United Kingdom on receipt of 4s.

ALSO OF

STODDART'S SEA SALTS.

Established nearly 40 years. Registered Trade Mark.

INVALUABLE FOR RHEUMATISM AND WEAK JOINTS.

1½d. Packets (in dozen boxes), 12s. per gross; 6d. or 2-lb. boxes, 4s. per dozen; 1s. 2d. or 7-lb. boxes, 9s. 6d.; 2s. or 14-lb. boxes, 18s.; 4. or 28-lb. bags, 36s. per dozen; 8s. or 56-lb. bags, 72s. per dozen; 16s. or 112-lb. bags, 144s.

All Proprietary Rights purchased March 15, 1886. Terms—Monthly account, less 10 per cent.; a reduction on 5-cwt. and 10-cwt. lots. Carriage paid on orders amounting to £2 and upwards. Full directions for use on each package.

Analysed and approved of by ARTHUR H. HASSALL, M.D., & OTTO HEHNER, F.C.S.

SOLD BY CHEMISTS, PATENT MEDICINE DEALERS, &c.

Wholesale London Agents, BARCLAY & SONS, 95 Farringdon Street, E.C.

Liverpool Agents, AYRTON & SAUNDERS, 149 Duke Street.

Manchester Agents, JAMES WOOLLEY, SONS & CO., 69 Market Street.

ALSO OF

LADY HESKETH'S DINNER PILLS, 13½d. per box

As prepared by T. Warren, Carmarthen, and subsequently by his Executors.

Wholesale London Agents—W. SUTTON & CO., Bow Churchyard; BARCLAY & SONS, 95 Farringdon St., E.C.; FRANCIS NEWBERRY & SONS, 37 Newgate St.

PURE SPIRITS OF WINE

60 o.p., 20/3 per gall.; 56 o.p., 19/9 per ll.

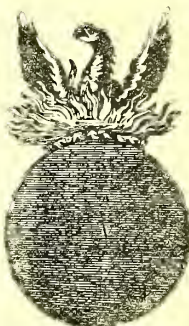
1/ per Gall. Discount for Cash with order.

Further allowance for quantity. STEAM STILL ONLY

GEORGE PHILLIPS & CO.,

ST. ANDREW'S DISTILLERY, CLERKENWELL ROAD, LONDON, E.C.

COLTHURST & HARDING



BALL DENOTES
COLOUR OF PAINT.

BRISTOL—Manufactories: Phoenix, Temple Gate. Offices: Temple Gate, Phoenix Bristol.

LONDON—Manufactory: Alpha Works, City Office: 16 Fish Street Hill, E.C. "Alpha Brand London."

HARD LUSTROUS EMBEL IN ALL THE ART SHAIR

For all kinds of decoration on Wood, Iron, D with a surface like Porcelain. Sold in all or in bulk. Prices and shades on application.

WHITE LEAD, ZINC WHITE PAINTS & COLOURS

MIXED PAINTS READY IN USE In Tins, 1, 2, 4, 7, and 14 lbs. each.

HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators &c. OIL BOILERS, REFINERS & MERCHANTS

Export Orders receive special and prompt attention

JONES & COMPANY, METHYLATED SPIRIT MAKERS

Regent Wharf, Copperfield Road, Mile End, London, E.
FROM RATCLIFF.

SAMPLES AND PRICES UPON APPLICATION

S.V.R.

PURE GRAIN SPIRIT 56 O.P. ... 18/

Do. Do. DOUBLE DISTILLED ... 18/

Cash with Order. Reductions for Larger Quantities than Two Gallons

S. S. & Co's Speciality for Perfumery. Samples free

STEPHEN SMITH & CO., BOW, LONDON, E.

MEDICATED LOZENGES

For Throat Hospital, British Pharmacopœia, and every description of Medicated Lozenges for Wholesale and Export Trade, apply to

T. BAGE BLYTON & CO

PHARMACEUTICAL CHEMISTS.

Manufacturers also of BOILED SWEETS of the BEST QUALITY POSSIBLE.

SOLE PROPRIETORS OF

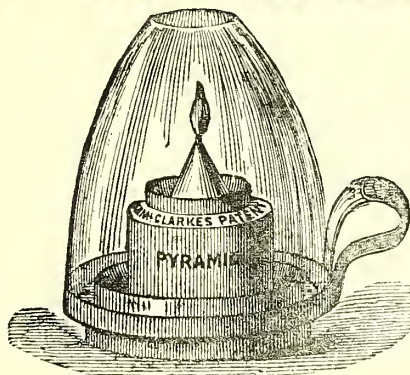
T. W. E. M. L. O. W.'S CHLORODYNE

Which has an extensive sale among Hospitals, Dispensaries, Medical Men, and CHEMISTS and Druggists throughout the World. Proportions of active ingredients stated upon the label of every bottle.

Proprietary and other Lozenges made for the Trade. Price Lists sent on receipt of application enclosing business card.

Address—76 GORDON STREET, LOWER BROUGHTON, MANCHESTER

SAMUEL CLARKE'S PATENT "PYRAMID" NURSERY LAMP FOOD WARMERS.



PATENT
"PYRAMID" NIGHT LAMPS, 6s. per doz., Lacquered or Bronze
AND
"PYRAMID" NIGHT LIGHTS, 7s. 6d. per doz. boxes.
Less 5 per cent. Cash.
8 Lights in each Box, burn 9 hours each.

The "Pyramid" Night Lamps render the burning a Night Light perfectly safe, entirely prevent FLICKERING (so objectionable in all Night Lights not burned in a Lamp), are clean, portable, and render a Night Light useful for many purposes where they otherwise would not be.

The "Pyramid" Food Warmers, by their peculiar construction—the glass chimney conducting and concentrating heat to the bottom of the water vessel—a larger amount of LIGHT and HEAT is obtained than can be in any other lamp of the same class. Without SMOKE or SMELL.

The "Pyramid" Night Lights are made much larger than any other Night Light, and give double the light; they are, therefore, very suitable for nursery lamps, lighting passages, lohhies, &c., and adaptable to many purposes for which the common Night Lights are useless.

DIRECTIONS FOR USING THE PATENT "PYRAMID" FOOD WARMER AND NIGHT LIGHTS.

The food which is required to be kept hot to be placed in the porcelain panakin, and water in the tin vessel—just sufficient to admit of the porcelain panakin being placed therein. Care should be taken in lighting the Night Lights not to injure the top, which is a protection for the wick, but simply apply a lighted match or taper, and allow the material to melt away.

	RETAIL.	WHOLESALE.	REDUCED PRICES—NET CASH.	
No. 1 Holds Half-pint Food, besides Water, price	3s. 6d. each	.. .. 30s. per dozen	.. .. 27/- per dozen.	Less 5 per cent. for Cash.
No. 2 " Three-quarters Pint Food " "	5s. 0d. "	.. .. 36s. "	.. .. 30/- "	
No. 3 " One Pint Food " "	6s. 0d. "	.. .. 42s. "	.. .. 33/- "	
Clarke's Hot Water Lamps " "	2s. 6d. "	.. .. 20s. "	.. .. 18/- "	
" "Pyramid" Night Lamps " "	1s. 0d. "	.. .. 8s. "	.. .. 6/- "	
" " " Lights " "	.. ..	.. .. 7s. 6d. "	.. ..

NOTICE.—The Patentee, in reply to numerous consumers, begs to state that he will warrant his PATENT "PYRAMID" FOOD WARMERS to answer the purpose for which they are recommended only when the "Pyramid" Night Lights are burned in them; the common night lights will not be sufficient heat. Persons who find a difficulty in obtaining the "Pyramid" Night Lights in good condition are requested to write to the Patentee, S. CLARKE, Patent "Pyramid" Night Light Works, Cricklewood, London, N.W., who will give the address of his nearest agent. The "Pyramid" Night Lights are best when newly made; the "Pyramid" Food Warmers are sold by all respectable dealers throughout the Kingdom, at 3s. 6d., 5s., and 6s. each.

N.B.—EXTRAS.—Porcelain Panakins, No. 1 8s. Lids 2s. per dozen.
No. 2 9s. " 3s. "
No. 3 10s. " 4s. "

Tin Panakins, No. 1, 8s. No. 2, 10s. No. 3, 12s. per dozen.
Clear Glasses, 4s. Roughed, 6s. Opaline, 6s.; Coloured, 6s. per doz.

PATENT "PYRAMID" NIGHT LIGHT WORKS, CRICKLEWOOD, LONDON, N.W.

N.B.—See that the Trade Mark, "PYRAMID," is on every Lamp and Light.

BY APPOINTMENT
TO H.R.H.

BIGG'S THE LATE PRINCE CONSORT

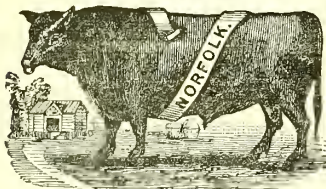
SHEEP AND LAMB DIPPING COMPOSITION,

FOR DESTRUCTION OF TICKS, LICE, &c., AND PREVENTION OF FLY.

Has now been used with Greatest Success for nearly Half a Century. Pamphlets on application.

LEICESTER HOUSE, GREAT DOVER STREET, BOROUGH, LONDON.

THE "NORFOLK" VETERINARY REMEDIES are the result of 40 Years' large practice



And have an enormous sale in virtue of their superior quality and moderate price. Used on the Royal Farms, and by thousands of Cowkeepers, Flockmasters, and Farmers in the kingdom. The leading remedies are The "NORFOLK" CONDITION DRENCHES for Cows, Bullocks, or Sheep, a sure preventive of Fever, Blood Diseases, and ordinary ailments; 9s. per dozen, 3 dozen 22s. 4. The "NORFOLK" CORDIALINE, or PAIN KILLER, the most powerful Restorative known for Horses, Cattle, or Sheep in Colic, Calving, Lambing, &c.; 12s. per dozen, or 3 dozen 31s. 6d. The "NORFOLK" RED WOUND OILS, a rapid and sound cure for all Kicks, Cuts, Scalds, &c.; 3s. 6d. per pint, or 36s. per dozen. The "NORFOLK" BROWN SPRAIN OILS, for Lameness, Old Swellings, Rheumatism, &c.; 3s. 6d. per pint, or 36s. per dozen. Usual discount to the Trade, and special terms for Shipping Orders. Manufactured for the Proprietor only.

F. SUTTON & CO., Chemists, NORWICH, ENGLAND.

CHEESE COLOR.

(ANNATTO.)

BUTTER COLOR.

(DANISH PROCESS.)

CHEESE RENNET.

(PURE CALF RENNET)

THE "EUREKA" COMPANY

MANUFACTORY OF DAIRY PREPARATIONS.

PURITY, UNIFORM QUALITY, AND STRENGTH GUARANTEED.

These preparations will be found to be of the most excellent quality, pure and strong, and, manufacturing these specialties only and on a large scale, we can offer special advantages to buyers of bulk.

It will pay to write for samples, and compare quality and price with what you are using.

LONDON OFFICE for U. K. and Colonies

54 CRUTCHED FRIARS, E.C.

MESSRS. JOHNSEN & JØRGENSEN,

AGENTS WANTED WHERE NOT REPRESENTED.

To whom please only for samples and particulars.

ESTABLISHED
NEARLY
50
YEARS.

DAY & SONS'

WORLD-FAMED HORSE AND CATTLE MEDICINES.

THE LARGEST SALE IN THE WORLD.

AWARD
28
PRIZE
MEDALS



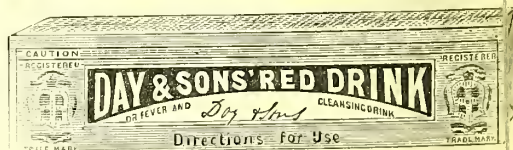
FOR Colic or Gripes in Horses and Cattle.
FOR Debility and Chills in all Stock.
FOR Scour in Calves and Lambs.
FOR Hoven or Blown Cattle and Sheep.
FOR Shivering Fits in Horses.
FOR Weakness after Lambing or Calving.

PRICE—10/ PER HALF-DOZEN, OR 19/ PER DOZEN.



FOR Healing all Wounds in all Animals.
FOR Kicks, Stake Wounds, Broken Knees in Horses.
FOR Cracked Heels and Saddle Galls in Horses.
FOR Sore Feet and Swollen Udders in Cows and Ewes.
FOR Dressing and Anointing in Lambing and Calving.
FOR Every Horse-keeper, Farmer, and Shepherd.

PRICE—2/6 PER BOTTLE.



FOR Fevers, Yellow, Indigestion,
FOR Red Water, Costiveness, and Dulness.
FOR Disordered System in Cattle.
FOR Bad Cleansing after Calving.
FOR Preventing Milk Fever and Inflammation.
FOR Purifying and Increasing the Milk.

PRICE—12/ PER DOZEN PACKETS.



FOR Ill Condition, Off Appetite, Disordered System.
FOR Heat-lumps, Itching, and Scoury Skin.
FOR Hidebound, Bad Water, and Blood Ailments.
FOR Coughs, Colds, Sore Throats, and Fevers in Horses.

IN CANISTERS. PRICE—3/6, 7/, 14/, AND 21/.

"ORIGINAL" UNIVERSAL MEDICINE CHESTS, £2 4s. and £5.

FOR ALL DISORDERS OF HORSES, CATTLE, CALVES, SHEEP, AND LAMBS.

Only Prepared by the Inventors, DAY & SONS, CREWE, CHESHIRE

May be obtained of Burgoyne, Burbidges & Co.; Sanger & Sons; Evans, Lescher & Webb; Barclay & Sons, &c., London; Evans, Sons & Co. Liverpool, &c. Exporters are invited to apply for terms; Liberal Discount offered.

FOR ALL CANINE AILMENTS. SPRATTS PATENT, LIMITED, DOG MEDICINES.

pamphlets on Canine Diseases for gratuitous distribution. Show Cards and Handbills Supplied.

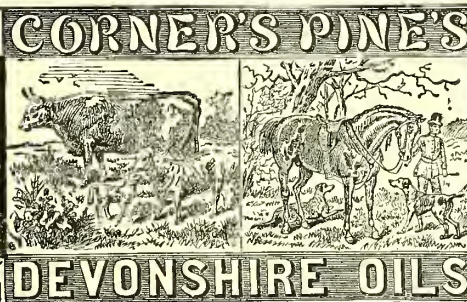
Address: **SPRATTS PATENT, LIMITED, LONDON, S.E.**
OR YOUR WHOLESALE HOUSE.

THE SK & SCOUR
IN LADS & CALVES
PROD BY
THE DEVONSHIRE
COMPOUND.

A diet preparation
from Devonshire Oils,
promoted to be a
sovereign remedy which
never fails to cure this
disease.

In bottles, 2/-

ESTABLISHED
1850
FOR CATTLE
HORSES
COWS CALVES
SHEEP LAMBS
DOGS &c
Bottled
at Devonshire
Use
MANUFACTORY
WELLINGTON, SOM.



SOLD
EVERYWHERE
THE GREAT
REMEDY
FOR ACCIDENTS
AND ANIMALS
Supplied by all
Wholesale
Houses
PRICE 2/-

CORNER'S FAMILY
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SHOULD BE USED
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Cures Sore Throats, Colds,
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Rheumatism, Lumbago,
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Special Warrant,
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Containing the following Matchless Remedies for all Disorders in Horses, Cattle, Calves, Sheep, & Lambs:

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For treating pain and inflammation in all wounds, saddle galls, strains,
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and swollen udders and sore feet. ½-dozen box, 7s. 6d.

THE RED DRENCH.

Operated for inflammatory disorders; such as fevers, pleurisy, foot-and-
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THE GASEOUS FLUID.

Used for colic or gripes and debility in horses, for colds, chills,
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THE CARMINATIVE CHALK.

A firm stomachic in severe diarrhoea or flux, by way of change of the
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Co., Christchurch; Jenoure & Co., Jamaica; Neild & Co., Buenos Ayres; Willett & Co., Port Elizabeth; &c.

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THE RED PASTE BALLS AND RED POWDERS.

Invaluable for ill-conditioned horses and after hard hunting and driving.
For coughs, colds, staring coat, itching, swollen legs, and want of strength.
The Powder is to be given in the feed. 7s. 6d. per dozen.

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Excellent for confined bowels and for worms in horses, but a bran mash
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dissolved Ball. 8s. per dozen.

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Invaluable for husk, hoose, or cough in cattle, calves, and sheep; for
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TOOTHACHE PELLETS

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Cure Toothache when everything else fails. Do not burr. Tubes containing
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Retail—6d., 10d., 1/6, and 3/-

This splendid preparation, which is selling immensely, can be had
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SHELLAC, GUMS,**PERFUMES, No. 30.****FIFTY KINDS.****9s. for 20 oz., Carriage Paid.**

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Contains all the Oil. The finest procurable.

Prepared from specially selected seeds.

Sold in 1 cwt. bags, 17s. per cwt., bags free; or in 28 and 56 lb. par-
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MANUFACTURING CHEMISTS AND MINERAL WATER BOTTLEERS,

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Starch GlossMakes Starched Linen like new. Does not stick to spider-like Materials.
Once tried always wanted. Used in the Royal Laundries. Sold every-
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Chemists in all parts of the world can add largely to their profits by

Goods. Liberal terms.

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Chemists and others requiring Pure Carmine of the **FINEST QUALITY** will find this far superior to any other. It is intensely rich and brilliant in colour, perfectly soluble, and offers great advantage in price.
1 oz. 3d.; 4 oz., 8s.; 1 lb., 30s., nett cash, free by post.

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Used in all the Principal Hospitals and Recommended by the Medical Profession.

For Home Use, Delicate Health, Accouchement, and for Ladies Travelling, they are *invaluable and indispensable*. They are Soft, Light, Antiseptic, and are supplied at the Actual Cost of Washing. Supplied by Chemists, Ladies' Outfitters, and Drapers.

Advertised at 1/- and 2/- per dozen. To Chemists, 9/6 and 19/- per gross. Pamphlets and Showcards on application.

The **SANITARY WOOD WOOL CO., LIM.**, 11 HATTON GARDEN, LONDON.

VALUABLE & INTERESTING TO EVERYBODY COMPRESSED HOPS.

Best Hops compressed into small parcels of one pound and half-pounds, and sent out in cases containing 30 lbs. each. These hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time.

They are introduced to the Public to enable them to make their own **BITTERS, YEAST, HOME BREWING**, and numerous other purposes. Full particulars given on each packet.

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COPIES OF "THE CHEMIST AND DRUGGIST" will be Circulated to
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This distribution will be a very important one added to the usual circulation of "THE CHEMIST AND DRUGGIST" in the United Kingdom, Australasia, and other Countries, and will comprise

ALL THE PRINCIPAL DRUG HOUSES IN THE UNITED STATES AND CANADA.

The living Trade with America in so many branches of industry, and the probable reduction of tariff, renders it essential that British Manufactures should be well advertised there at this time, and the circulation now offered presents a valuable opportunity of bringing Chemicals, Pharmaceutical Preparations, and Druggists' Sundries before those buyers who can specially influence the demand.

This Issue of May 19th will be of particular interest, as it will contain Reports of the Annual Meeting of the Pharmaceutical Society, Dinner, &c.

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THE ONLY PERFECT ENEMA OBTAINABLE.

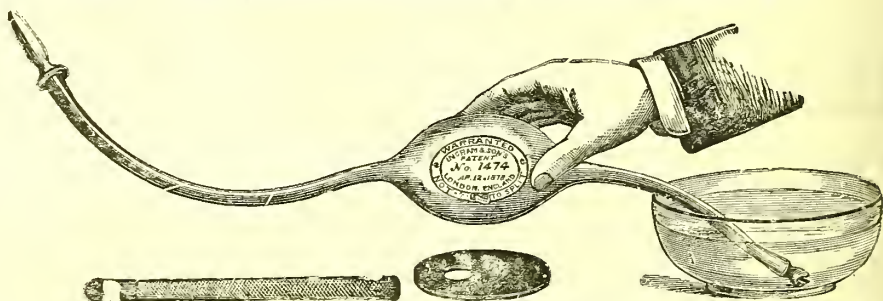
INGRAM'S IMPROVED HIGGINSON ENEMA AND SYRINGE APPARATUS

(BY ROYAL LETTERS PATENT).

Made without Seams or Ribs by our Patent Process of dipping in a solution of India Rubber, thus adding great strength and durability.

NONE GENUINE UNLESS STAMPED WITH NO. OF PATENT 1474.

CAUTION.—The only
Enema made without
Ribs.



All imitations may be
detected by the Ribs on the
liable to split.

WARRANTED NOT TO SPLIT.

A.—Metal Pin Valve.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is perfectly smooth on the surface, will not become hard or sticky, will not leak, and will not admit air while injecting or refilling. Specially prepared to resist the heat of tropical countries.

The great superiority of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA over others has given rise to VARIOUS IMITATIONS, and it has become imperative that the Patentees should, in order to prevent DECEPTION, explain the PROCESS OF MANUFACTURE OF THEIR ENEMA and the MODE OF MANUFACTURE OF IMITATIONS thereof, as they have UNDENIABLE PROOF that INFERIOR ENEMAS are positively BEING SOLD as their "ADVISED" PATENT SEAMLESS ENEMA.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is made by a NEW PATENT PROCESS, viz.: By repeated dipping in a solution of India Rubber until the required substance is attained. This process adds greatly to its STRENGTH and DURABILITY, and, at the same time, dispenses WITH ALL SEAMS, which, as is well known, are weak points in an Enema. This improved mode of manufacture (the result of long study and experience) enables the Patentees to produce a PERFECT ENEMA WITHOUT SEAMS, thus overcoming the great fault to be found in ALL other Enemas, viz.: SPLITTING AND LEAKING, which has always been a source of trouble.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is fitted with IMPROVED VALVE which prevent the admission of air with the fluid and CAN at any time BE REPAIRED, if necessary.

CAUTION.—Imitations of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA are made of several pieces of Sheet India Rubber, which are cemented together and shaped in a mould, thus PRODUCING RIBS ON THE SURFACE, and ENEMAS SO MANUFACTURED ARE ALWAYS LIABLE TO SPLIT AND LEAK AT THE SEAMS, AND THUS TO BECOME QUITE USELESS.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA may be distinguished from ALL IMITATIONS by its ENTIRE FREEDOM FROM RIBS OF ANY DESCRIPTION on its surface, and by having an IMPROVED METAL PIN VALVE at the suction end A; and it is acknowledged to be the ONLY PERFECT ENEMA OBTAINABLE.

Patented in England, No. 1474, April 12, 1878; in France, No. 126,909, October 11, 1877; and in America, No. 212,939, March 4, 1879.

To be obtained of all Surgical Instrument Makers, Druggists' Sundriesmen, Chemists and Druggists, in the three following qualities:—

No. 1a. Highly Polished, in Red, Green, Blue, Black, or White.

No. 1b. Unpolished, in Red, Green, Blue, Black, or White.

No. 2. Unpolished, in Drab only.

Favourably noticed in "British Medical Journal," December 13, 1879; in the "Lancet," January 8, 1880; and in "British Medical Journal," September 30, 1882.

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BOOT TOP FLUID,

For cleansing and preserving Boot Tops, totally eradicating all stains, and restoring their original colour.

Made in five colours—White, Light Brown, Nut Brown, Mahogany, and Pink.

BOOT TOP POLISH

Is a cream to be used after the Fluid to polish the Top. It also nourishes the Leather.

BOOT TOP POWDERS.

IN ALL COLOURS.

These Powders have been before the public for 30 years, giving the highest satisfaction, keeping Boot Tops equal to new. These Powders never turn Black.

SADDLE PASTE.

This preparation is for softening and preserving all kinds of

Saddles, Bridles, Driving Reins, and every description of Brown Leather. It cleans, softens, and imparts a handsome appearance.

BREECHES PASTE.

This Matchless Paste for Leather, Kersey, and Cord Breeches, &c., will be found far superior to any that has ever been offered to the public; it will cleanse and beautify, rendering them soft and pliable; does not require rubbing, and will not rub off. Warranted perfectly free from dust, and needs but one trial to prove its superiority over all others.

WATERPROOF HARNESS BLACKING.

Neither requires oil, dye, or any other preparation; and it is the only one ever perfected for preserving, rendering supple, and giving

A POLISH, EQUAL TO PATENT LEATHER,

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None other is used in the Queen's Establishments.

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For restoring and preserving all kinds of Patent, Enamel, and Morocco Leather; also Brown Leather Boots, &c. It renders them perfectly elastic. It will not attract heat. Likewise for cleaning and restoring Oil Paintings, Carriage Panels, &c. For French Polished, Japanned, and Varnished Goods it will be found unequalled.

NE PLUS ULTRA RAVEN JET FRENCH VARNISH.

WARRANTED NOT TO CRACK.

It is entirely free from any offensive smell common to most polishes. It instantly produces the most brilliant polish on the ordinary Walking as also Patent Dress Boots and Shoes for morning or evening wear.

ELASTIC WATERPROOF VARNISH.

For Hunting, Shooting, Fishing, or ordinary Walking Boots, Coach and Cab Heads, Phaeton, Gig, Cart Aprons, &c., especially old Enamelled Leather, and for all kinds of Indianrubber Goods, particularly for Goloshes. It will not crack or wear brown. Applied to the soles of boots and shoes they will be proof against wet.

HOPLEMUROMA.



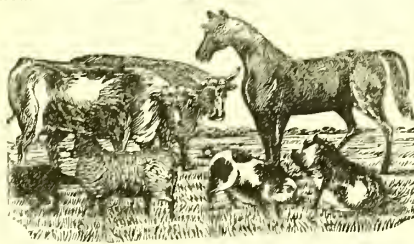
Cures horses' brittle and shelly feet, sand cracks, scabby toes, diseased frogs, fever, quittor, rapidly increasing the growth of the horn, and preventing horses throwing their shoes, making the hoof tough, and prevents all lameness. This preparation is warranted to cure all the above diseases, has been before the public for 30 years, and never known to fail. No owners of horses should be without this invaluable preparation.

MARVELLOUS EMBROCATION.

FOR HORSES AND CATTLE.



Takes away all soreness, and gives immediate relief and speedy cure in cases of lameness, bruises, sores, sprung sinews, sprains, enlarged joints, overreach, splints, curbs and wind galls, also cuts, broken knees, wrung shoulders, sore backs, chapped heels, sore throats, influenza, and rheumatism.



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Fever, Cough, Diuretic, Astringent, Condition, and Alterative.

COLIC DRAUGHTS.

For Flatulent and Spasmodic Colic.

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CRACKED HEEL LINIMENT.

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BLISTERING OINTMENT.

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CONDITION MEDICINE

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FEVER FOWDERS.

Prepared by W. T. CLARK, M.R.C.V.S.L.

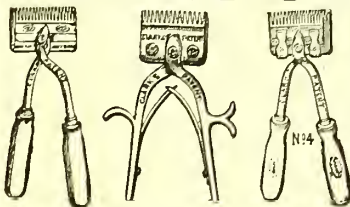
MARVELLOUS EMBROCATION.

FOR DOMESTIC USE.



Cures Bronchitis, Sore Throats, Rheumatism, Lumbago, Wheezing in the Throat or Chest, Sciatica, Sprains, Bruises, &c.

HORSE CLIPPERS.



No. 1.—This well-known Instrument has been before the public for 16 years, and has given universal satisfaction, and is everywhere acknowledged to be by far the best, and therefore the cheapest, in the market.

No. 2.—One-handed Clipper for heads, manes, quarters, and difficult parts, leaving one hand at liberty to hold the horse, thus enabling the clipping to be performed by one man only. This Clipper is also used for cutting the human hair.

No. 4.—A two-handed instrument, with the Patent Grasshopper Springs over the plates. This improvement renders the machine simply perfect, producing a softness and ease of motion not to be surpassed.

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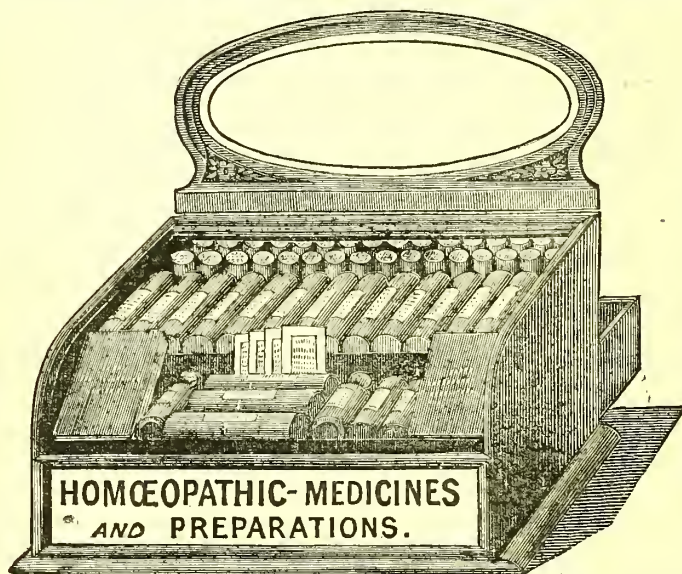
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OUR £5 AGENTS' CASE,

IN MAHOGANY, WITH BENT-GLASS FRONT, AND ORNAMENTAL WORK ON TOP, WITH BEVELLED MIRROR.



This Case takes up the same room on Counter as the 4-Guinea Case,

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The same in Oak, American Walnut or Ebonised Wood, 7/6 extra

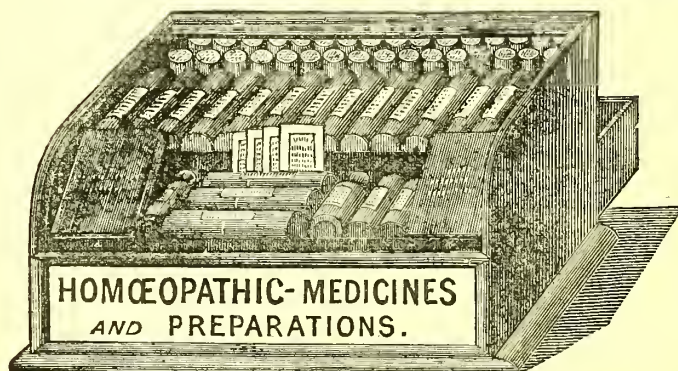
CONTAINS—

93 bottles of Tinctures to retail at	1/-	s. d.
93 " Pilules	1/-	13 0
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2 " Homœopathic Camphor	1/-	2 0
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4 packets of Arnica and Calendula Plaster to retail at	6d.	2 0
Retail		10 0

Pamphlets on the treatment of "Common Complaints," free.

OUR £4 4s. AGENTS' CASE,

IN MAHOGANY, WITH BENT-GLASS FRONT.



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The same Case in Oak, American Walnut or Ebonized Wood, 6/- extra

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80 " Pilules	1/-	0 0
8 " External Tinctures to retail at ..	1/-	8 0
2 " Homœopathic Camphor	1/-	2 0
2 " Camphor (Rubini's)	1/-	2 0
4 " Camphor Pilules	1/-	4 0
2 copies of Dr. Wood's Book "Easy Homœopathy"	1/-	2 0
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Pamphlets on the treatment of "Common Complaints," free.

Dimensions—9½ in. high, 18½ in. wide, 14 in. deep.

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THE FIRST ESTABLISHED HOMŒOPATHIC CHEMISTS IN GREAT BRITAIN.

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PRIZE MEDAL,

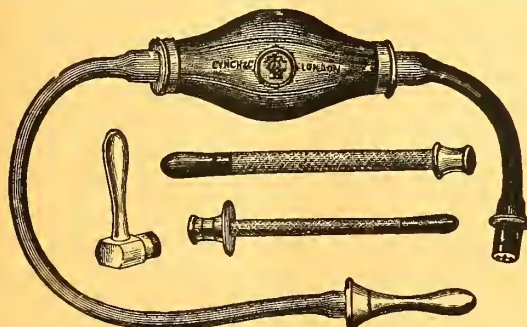


SYDNEY, 1879.

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(Patent 13,816, dated 12th October, 1887).

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In
Slide Cedar Box,
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43/-

Less usual Discount.

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In the employment of Glass they have secured a material not only free from the foregoing defects, but combining all the essentials of incorrodibility, cleanliness, and perfect continuous action.

The Valves are so situated, being placed at the extremity of both inlet and delivery tubes, as to admit of their ready removal and replacement, if desirable; and being within the Indiarubber are perfectly protected from any possibility of breakage.

The simplicity of the Apparatus, the entire absence of complication, and the extremely moderate price warrant the Inventors in hoping for its universal adoption.

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SHOWROOM.

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LYNCH & CO.

"THE BEST NATURAL APERIENT."

Persistent attempts are made by interested parties to deceive the public by offering Natural Mineral Aperient Waters with marks, names, and designations very similar to those which are used by the

APOLLINARIS COMPANY, LIMITED,

FOR THE

NATURAL MINERAL APERIENT WATERS

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The medical profession order Cadbury's Cocoa Essence in thousands of cases, as the most wholesome beverage. Be sure

you get it when asked for, as imitations are often pushed for the sake of extra profit.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

SOLE IMPORTERS

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Partnerships.
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Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that these may be sent in as early in the week as possible.

CHANGE COLUMN ADVERTISEMENTS will appear on page 8 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE, and crossed MARTIN & CO.

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CHEMISTS' TRANSFERS. MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C. CHEMISTS' TRANSFER AGENTS.

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2. £450.—LONDON, S.E.—Prescribing and Retail Business; very profitable; returns nearly £450; well-fitted shop; good house, with good garden attached; rent low; price £330.

3. £500.—LONDON SUBURB.—Retail and Dispensing; established about seven years; returns (gradually increasing) £500; no immediate opposition; well-fitted shop and good stock; good-sized house, held on lease, small garden attached; vendor being anxious for an early sale will accept reasonable offer.

4. £1,000.—LONDON, GOOD CENTRE.—First-class Retail and Dispensing Business; returns about £1,000; can be much improved; shop and stock; large and convenient house; about £330 required.

5. £450.—LONDON, N.W.—Good rising suburb: Retail and Dispensing Business, with Prescribing; returns average £450 yearly; capable of being largely increased; handsome shop and good stock; good house and garden; price £350; open to an offer.

6. £450.—MIDDLESEX.—Good locality; Dispensing, Prescribing, and General Retail; returns average £450; can easily be doubled by energetic man; well-fitted shop and good stock; large house; about £330 required.

7. £1,200.—WITHIN EASY DISTANCE OF LONDON.—First-class Business; held by the present owner many years; returns about £1,200 yearly; net profits over £400; premises large and convenient; full particulars on receipt of references; about £1,200 required.

8. £1,450.—MIDDLESEX.—First-class Retail and Dispensing, with good sale of Proprietary Medicines; returns between £1,400 and £1,500, with net profits of over £400; shop well fitted and attractive; convenient house in good condition; about £1,400 required.

9. £2,000.—PARTNERSHIP WITH SUCCESSION.—A Partner required for a very old-established Retail and Dispensing Business, with Mineral Water trade attached, situate in South of England; returns nearly £2,000 yearly; convenient premises; arrangements can be made for purchaser to succeed to the whole in a year or two; about £800 required; references must be enclosed.

10. £550.—IMMEDIATE.—LIVERPOOL.—Dispensing and Retail; well established; held by vendor over 11 years; returns nearly £550, good profits; corner shop, well fitted; rent low; vendor taking larger business will accept £250 from an immediate purchaser.

11. £600.—WEST OF ENGLAND.—Good market town; attractive locality; old-established Retail and Dispensing, with good country trade; returns about £300 yearly, can be much increased; fairly fitted shop and good stock; convenient house, and good warehouse room; small premium and valuation only required.

12. £1,350.—SUSSEX.—Good town; first-class Retail and Dispensing Business, very old-established; attractive shop and good stock; returns nearly £1,350 yearly, with good profits; valuation terms can be arranged.

13. £350.—WALES.—Good town; Light Retail and Family trade; returns about £350, capable of being much increased; good house, &c.; about £300 required.

14. £600.—GLOUCESTERSHIRE.—Small Mixed Country Business; returns at present about £600 yearly, increasing; large and convenient premises, with good house; price about £450.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION. Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms, where business of a confidential nature requires the special attention of a London agent.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

SALE BY AUCTION.

SALVAGE DRUGS, HERBS, AND SEEDS.

MESSRS. TOPLIS & HARDING will SELL by AUCTION at the London Commercial Sale Rooms, Ming Lane, on Thursday, May 3, at 1 o'clock punctually, on behalf of the Fire Insurance Company, the SALVAGE recovered from the late fire at Mr. G. Gaines', Parker Street, Drury Lane, now lying at Messrs. Milbourne's Warehouse, 39 Commercial Road, East, and consisting of areca nuts, turmeric, galingall root, roses, buckthorn juice, grains of paradise, coriander seed, cuttle fish, liquorice root, camomile flowers, quassia chips, belladonna root, acacia, charcoal, sage leaves, and a large quantity of barks and drugs variously packed, may be viewed the two days preceding the sale, and catalogues had of Messrs. Jenkin & Phillips, 51 Lime Street; and of the Auctioneers, 16 St. Paul's Churchyard.

PARTNERSHIPS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

MANUFACTURING Chemists, well-established firm, with works in East-End of London, can receive Partner with £1,500, to take place of one retiring through illness. Williamson, Smith & Co., Financial Brokers, 53-56 Wool Exchange, Coleman Street, E.C.

A GOOD opportunity for an investment of from £200 to £500 in a good sound and profitable chemist's business; must be a qualified chemist, and would be required to take the management of one of the branches at a salary to be agreed upon; books show for the last few years that a good dividend may be relied upon. "Stam." Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

PARSON C. BAKER,

TRANSFER AGENT,

8 Stockbridge Terrace, S.W.
(CLOSE TO VICTORIA STATION).

FOR DISPOSAL.—Excellent Mixed Country Retail; ESSEX; returns £630, increasing; full prices; rent £22; price £400. DURHAM.—Improving Business, well situated; returns £1,000; price £500. LONDON, N.—Neglected trade; doing £12 a week a few months since; ill-health; price £200. MIDLAND COUNTIES.—Returns £400; price £200.

WANTED TO PURCHASE.—Southern County, good Homoeopathic Pharmacy. On the East or South Coast, well-established Business, returning over £1,000. In London or Country, good Family Trade, from £1,200 to £1,500.

PARTNERSHIPS—continued.

FRANCE.—Avis Important.—A French Chemist, Pharmacien of the first class, having achieved success for 10 years in the production of an article under the name of Tartrifuge, or Antitartre Nivet, wishes to find a Partner who can advance £4,000 in order to set up a manufactory in London for the same. Also for another production, the composition of which can only be divulged to a person interested; this latter product is extensively used in France, but little known in England; success certain. For further particulars address, Mons. Nivet, 24 Rue de la Rochefoucauld, Paris.

TO BE LET OR SOLD.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TUNBRIDGE WELLS.—To Let, capital Shop with dwelling-house, in excellent central position; rent low, £35 per annum; admirably adapted for a chemist's business. Apply at once, Mr. Howard, Ironmonger, Tunbridge Wells.

WAREHOUSES, suited for Wholesale Druggists, &c., to be Let, in Bunhill Row, E.C., at low rents. For plans and full particulars apply to Mr. Charles Bell, Architect, 3 Salter's Hall Court, Cannon Street, E.C.

CHEMISTS would hear of a most favourable opportunity of opening a shop (new) in a large thriving and growing northern suburb of London by applying to A. B., care of T. Russel Kent, Solicitor, 8 Serjeant's Inn, Fleet Street, E.C.

MANUFACTURING Premises for Wholesale Druggists and Manufacturing Chemists.—Three good floors, enclosed in separate yard, with chimney, £150; also an adjoining third floor, about 120 feet by 30, good light, £70. Letchford's Buildings, close to Bethnal Green Junction.

TO be Let, several first-class Houses with Shops, built on an entirely new principle, and situated in one of the principal thoroughfares and in the centre of a fashionable, well-known visiting town; the shops are large and double-fronted, fitted up with the electric light, and are suitable for Chemists and Druggists. For full particulars address, H. Adams, Monson Road, Tunbridge Wells. None but first-class business men need apply.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, a Retail and Dispensing Business that will bear investigation; Eastern counties preferred; price about £1,000. Address, "Spero," Barron, Harveys & Co., Wholesale Druggists, Giltspur Street, London, E.C.

WANTED, Retail and Dispensing Business in London or an improving suburban district; returning from £8 to £10 a week; must bear investigation; no agents. Address, "Chemist," 83 Stamford Street, S.E.

WANTED, a reliable middle-class Business, capable of increase, in a healthy locality within easy distance of London; good house and moderate sized garden indispensable. Principals only address, giving fullest particulars, in strict confidence, to "Bonâ-fide," care of Mr. Richards, Chemist, 404 Essex Road, Islington, London, N.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

IMMEDIATE Disposal, genuine small East End Business, now under manager; no reasonable offer refused. Apply first instance, 196 Belsize Road, N.W.

IMMEDIATELY, through death of proprietor the Business of Chemist and Druggist successfully carried on for 23 years by Mr. E. C. Bell, Berkeley; stock small; incoming very low. Apply, E. C. Bell, or C. Scott Esq., Berkeley, Glos.

A SMALL old-established ready-money Business for sale in Staffordshire, the proprietor having another business; a first-rate opportunity for an energetic young man; rent low; price £100. Apply, M., care of Messrs. Wyleys & Co., Wholesale Druggists, Coventry.

DEATH Vacancy.—In pleasant town in West Norfolk; price about 300 guineas to immediate buyer; capable of great extension by an active man; good house and premises. Apply to Mr. Floyd, Drug Valuer, 10 St. Edmunds.

LIGHT Retail; commanding corner position near railway station; no opposition; large neighbourhood; a stepping-stone to fortune to energetic man; price £275; place well fitted and stocked; rent £10. Write, Z, Messrs. Wright, Layman & Umney, 50 Southwark Street, S.E.

SOUTH HORNSEY.—Established 27 years; working at present under greatly disadvantageous circumstances; principals only; suitable for a Bach; could let private part of house for rent. Apply on premises, T. Lambert, Chemist, 30 Matthias Road, South Hornsey.

AN old-established Prescribing and Light Retail Business for disposal in a large Midland town; several very lucrative proprietaries attached; income about £600. For address, &c., apply, T. J., care of Messrs. Southall & Barclay, Birmingham.

£275.—London, S.E.—First-class Retail and Dispensing Business, in main thoroughfare; increasing; shop handsomely fitted and well stocked; good house on lease at moderate rent, in perfect repair, convenient for letting off. Address, "Subcarb," Wright, Layman & Umney, Southwark Street, London, S.E.

OLD-ESTABLISHED Chemist's Business; good position, East End, centre of market; long lease; well fitted; rent £70, £30 let off to good tenant; taking last year, £380; price £220; no agents; good reasons for letting. Address, in first instance, "Beta," Sanger & Sons, 100 St. Paul Street, W.

LONDON, N.—Good ready-money Dispensing and Prescribing Business; returns under a manager £650 a year, and capable of further development; shop well fitted, with good stock, and dwelling-house attached; vendor disposed of to a bonâ-fide purchaser for £550; vendor leaving England; full investigation invited. Apply, 28/30, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

R Sale (Lancs.), a Branch in main thoroughfare of a town of 13,000 inhabitants; opened 15 months; doing on £8 per week, under manager; a first-class opening for a young man; about £300. For further particulars apply, G. B. care of Barron, Harvey & Co., Giltspur Street, London, E.C.

500 RETURNS.—General Country Retail, in pleasant market town, Yorkshire, centre of an agricultural district; also good connection in Mineral Waters; vendor is retiring, and will give good introduction; variation of stock and fixtures only required, estimated at £1, part of which can remain on approved security. F. Brett, Valuer, 60 St. Stephen's Road, Leicester.

7000 POPULATION; profitable Retail and Prescribing Business, doing nearly £200 under management; nearest opposition mile away; rapidly increasing neighbourhood; pushing young man could more than double the amount; rent, rates, taxes under £20 a year; modern plate-glass front, good shop, six rooms, two cellars. M. George, 59 Cowley Street, Derby.

VALUABLE Proprietary Business for sale.—Gillingwater's world-renowned Hair-dye and Toilet Preparations (10 proprietaries), from which a fortune was made by the late Mr. Gillingwater; with judicious advertisement can soon again be made very remunerative; price for whole, with stock, £300 net, or offer; must be sold. Apply to Mr. Bloodworth, care of Gordon, Murray & Co., 50 Tylard's Road, W.C.

STAFFORDSHIRE Potteries.—A small ready-money Prescribing, Dispensing, and General Retail Business; situated in main street of busy market town; excellent position; low rental; capable of great increase; good proprietary articles in regular demand; will sell at a valuation; rare chance for anyone wishing to commence a new or cutting business. Address, S. P., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

YORKSHIRE Coast.—Good-class Retail and Dispensing Business; handsomely fitted, well stocked; excellent 10-roomed residence; rent only £45; long lease; earning £850; very profitable; price £700. Also in CESHIRE, Retail, Dispensing, and Agricultural Business; earning £1,600; net profit £350; price, £150 goodwill and valuation. Apply to Messrs. Berdoo, 30 Jewry Street, Agate, City.

SPECIAL.—South Africa.—A good-class Business for immediate disposal; returns nearly £2,700; net profits over £1,700 yearly; no cutting prices or stores; about £400 required; the business will bear strict investigation; London wholesale house given as reference; full particulars in confidence on receipt of business card or reference; capital opportunity for two young men as partners. Apply at Messrs. Orridge & Co.'s Offices, 32 Ludgate Hill, London, E.C.

SITUATIONS OPEN.

Is. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, an Assistant, must be a good Salesman and Counterman; liberal salary (increasing). Apply, E. Tall, Chemist, 52 Marchmont Street, Russell Square, W.C.

WHOLESALE Drug Trade.—A strong man required for the Dry Counter, as second hand. Apply, by letter, stating experience, to Z., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLER.—Wanted one with a connection among retail chemists to take orders for stationery, printing, &c. Apply, letter only, N. M. G., care of Messrs. E. & Co., Cullum Street, Fenchurch Street, E.C.

WANTED at once, Assistant as Junior; outdoors; qualified; about 22; quick and accurate dispenser; good counterman. Apply, F. J. H., 10 Church Street, Malvern.

ASSISTANT (indoors), for Stock, &c.; must be experienced and well recommended. Apply, with full particulars, to Lewis' Drug Stores, 20 and 22 Great Portland Street, W.

WANTED, at once, qualified Assistant for Dispensing Department, Haymarket Stores; hours 9 to 7; outdoors. Apply by letter only, stating salary and other particulars, The Chemist, 23 Haymarket, S.W.

WANTED, temporarily, a Junior Assistant in a chemist's shop in London; short hours; time for study for exam. Address, "Chemist," care of Clarke, Son & Platt, 85 Gracechurch Street, London, E.C.

JUNIOR, for good-class mixed retail, prescribing, and dispensing business; knowledge of French desirable but not essential. State age, height, salary, references, &c., to G. T. Botterill, Pharmaceutical Chemist, Grimsby.

WHOLESALE Drug Trade.—A London house requires a smart hand used to calling over and getting out orders; none but those having had similar experience need apply. Address by letter only, Z., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED immediately, a qualified Assistant; must be a good dispenser; for a country business; aged 20 to 25; single preferred. Apply personally to W. W. Flood & Co., 102 and 103 Blackman Street, Boro', S.E. Satisfactory references indispensable.

JUNIOR Invoice Clerk wanted, who has a knowledge of the Drug Trade; must be a good writer and quick at figures. Apply, by letter only, stating age, experience, &c., Box No. 31/51, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

A QUALIFIED Assistant wanted at once for China, having a knowledge of French and of the manufacture of Aerated Waters; first-class experience and highest references indispensable; 25 to 30. Apply to Messrs. Dakin Bros., 2 and 3 Creechurch Lane, London, E.C.

WILLIAM HESELTINE & SON, Wilson Street, Finsbury, E.C., are open to engage a first-class man to introduce and appoint Chemists as Agents for their Teas; liberal terms to one having necessary qualifications (see full page advertisement appearing in this issue). Apply by letter, as above, in first instance.

THE British Cigarette Manufacturing Syndicate (Limited), Manchester, whose goods are made from the finest tobacco, and sold at lower prices than the very commonest, are prepared to appoint Travellers and Agents to represent them in all parts; sample 100 sent carriage paid for 2s. 3d., Turkey or Virginia.

BOURNEMOUTH, easy distance from.—A young gentleman is required to give his services in return for thoroughly comfortable home; duties very light; half usual hours; no Sunday duty; to a young man desirous of studying this is a splendid opportunity. "Chemist," The Beeches, Winton, Bournemouth.

WANTED, qualified gentleman, accustomed to first-class family business, of good address and unexceptionable references, to take charge, and in the absence of the principal to entirely manage the business with a view to partnership and succession. Address, "Omega," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A N Assistant; indoors; must be a quick and reliable dispenser, accustomed to a first-class retail, and capable of taking entire charge; highest references indispensable. Apply, stating height, salary, &c., required, enclosing photo (to be returned), R. Sunner, Pharmaceutical Chemist, 31 Patrick Street, Cork.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

MANAGER; permanency; qualified; 41; single. A. B., 22 Duke Street, Portland Place, W.**E**VENING Engagement, after 6; qualified. "Major," 46 Swan Street, Borough, S.E.**A**S Assistant; Mixed business; aged 23; total abstainer. Eirianfa, Abergele, North Wales.**J**UNIOR; 3½ years' experience; references; Wales or London. Brynamlwg, Llanon, Aberystwith.**A**SSISTANT for summer months, aged 21; qualified. Bellamy, Maiden Row, Louth, Lincolnshire.**B**RANCH Manager or Assistant, in or outdoors. M., Preston-on-Wye, Hereford.**A**SSISTANT or Branch Manager, aged 22. M., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**J**UNIOR; Minor qualification; accustomed to good Retail and Dispensing business; excellent references. T. H., 3 Grev Friars, Leicester.**A**SSISTANT (24) in good-class Dispensing business; 11 years' experience; Hall qualification. "Assistant," The Beeches, Winton, Bournemouth.**J**UNIOR or Improver; aged 20; 5½ years' experience; indoors; good references; disengaged. B. P., 24 Wilberforce Street, Hull.**I**N Wholesale or Retail; advertiser married; aged 32; disengaged; satisfactory references. B., 18 Well Street, Great Yarmouth.**A**S Improver; 2 years' experience; good home more desirable than salary. Address, "Alpha," 45 Church Street, Shildon, Co. Durham.**M**ANAGER or Dispenser; temporary or permanent; chemist or surgeon's. Dunkerly, M.P.S., 88 Morton Road, Islington, N.**B**RANCH Manager or otherwise; experienced; good references; aged 38; disengaged. J. C. Skinner, 97 Lower Addiscombe Road, Croydon.**T**O Chemists.—Locum-tenens, stock taken, books audited, &c., by experienced gentleman; good address; terms moderate; town or country. "Locum," 43 Brook Green, W. Please cut this out.**W**ANTED, situation by practical working foreman; understands Essences, Syrups, Cordials, Machinery and Beer Bottling, &c.; aged 30; with 12 years' experience; highest references; moderate salary for permanency. R. F. L., 37 High Park Road, Southport, Lancashire.**O**UTDOOR Assistant. F. M., 24 Faunce street, Kennington Park, S.E.**R**EGISTERED Chemist, Dentist; married Prescriber, Dispenser, Tooth-extractor; mechanical and retail knowledge almost nil; long acted as medical assistant. "Chemicus," 43 Elizabeth Street, Bradford.**A**S Junior, where two or more are kept; accustomed to good-class Family and Dispensing trade; aged 20. Address, F. D., Beasby House, Grimsby, Lincolnshire.**M**EDICAL.—Wanted, situation as Dispenser unqualified Assistant; take consultations and attend midwifery; university curriculum. Address, No. 9084 Scotsman Office, Glasgow.**T**OWN Traveller, Manager, or other responsible position; good experience and address; unquestionable references; disengaged; aged 29; married; strict temperate. "Traveller," 20 Princes Street, Landport, Hts.**A**DVERTISER (21) seeks situation as Warehouseman in Wholesale Druggist's or Sundries; good references. "Cortex," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**W**HOLESALE Drug Trade.—A situation required as Head or Under Warehouseman; many years' experience with both town and provincial firms. Address, 08/26, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading which can be obtained on application.

PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 3 Pupils passed the last Examinations.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Cæsar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. MINOR.—Exercises Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Mir, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.**D**ENTISTRY.—A Surgeon Dentist, of great experience, will shortly be on tour, in June, inspecting Chemists in Elementary Surgical and Mechanical Dentistry; terms and vacant dates given on application; mechanical work of every description executed very moderately from 1s. 6d per tooth; beautiful full set, celluloid, in case of exhibition, 40s. "Dentorium," 42 Stamford Hill.THE PHARMACEUTICAL COUNCIL ELECTION, 1888.
ELECTION OF COUNCIL FOR 1888.*To the Members of the Pharmaceutical Society.*

GENTLEMEN,

I have been urged by my friends in Scotland to offer myself for election to the above Council with a view of regaining for that part of the country that proportion of representatives which it is even numerically entitled to, and which it has possessed up to last Election. It was also impressed upon me that I would be able to represent the interests and wishes of Provincial Chemists generally, whose circumstances are often so different from those whose business is carried on in large towns.

While of opinion that the imposition of a suitable Curriculum on our Students is likely to be beneficial to the future of our calling, I am strongly persuaded that such a course should be accompanied or followed up by a measure which would remove the anomalies in the present Acts, and put our legal rights once for all on a clear and satisfactory basis.

I believe also that the time has come for consolidating and popularising the Society by removing some of the distinctions between the various classes of its members, and thus increasing the inducements to join the Society at an early age.

If elected, I shall endeavour to promote the interests of Pharmacists to the best of my ability, and discharge the duties of the office with courage and fidelity.

I am, yours faithfully,

JAMES WATT.

Haddington, N. B., April 24, 1888.

To the Members and Associates of the
PHARMACEUTICAL SOCIETY.

GENTLEMEN—

In seeking re-election to the Pharmaceutical Council, I have to express my regret for having been unable (owing to my visit to India) to attend some of the meetings.

During the last year I have had a fair insight into the work of the Council, and, in my opinion, a great many questions are taken to Committee which could, with greater advantage, be discussed openly and freely in Council meetings. The opinions held by the members and the votes recorded would then be reported. This, I believe, would create greater interest in the affairs of the Society.

I was opposed to the establishment of a research laboratory, as, as I did, that the money which will be left, after completing our present new premises, could be used with better results in extending our arrangements for teaching Practical Pharmacy. The Pharmacy Act Amendment Bill is a step in the right direction, but falls short, inasmuch as it has neglected this opportunity of asking the State to extend our prizes to a class when fresh conditions are imposed. Should this Bill be rejected, I hope the Council, having the unanimous support of the trade, will have the courage to introduce a much larger and more comprehensive measure to protect our trade interests.

If re-elected, I shall endeavour to serve your best interests.

I remain gentlemen,

Your obedient servant,

GWILYM JANS.